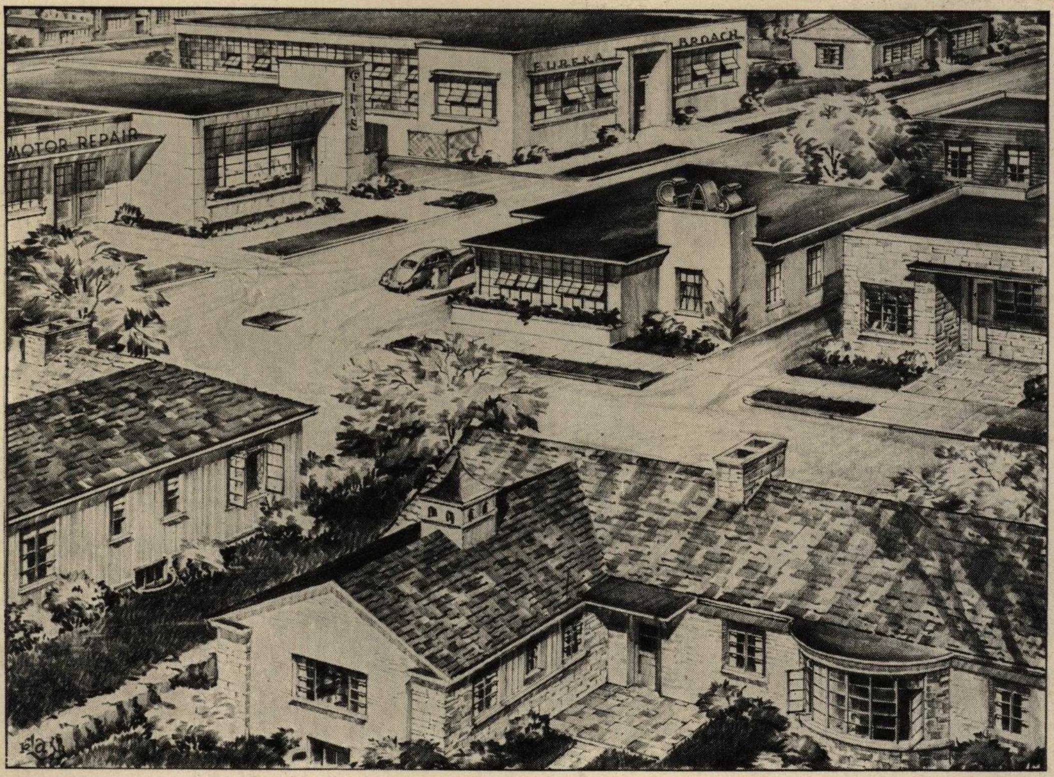
AIA FILE 16 E



Fenestra

STOCK PRODUCTS

SWEET'S FILE FOR BUILDERS, 1950

Fenestra

STOCK PRODUCTS

Fenestra windows and doors are stocked by local dealers, ready for delivery to job.

THE FENESTRA CODE

. . . To provide the architectural profession specifically, and the construction industry generally, with building products of excellent design and of uniform high quality.

. . . To contribute to the progress of architecture by developing new and superior materials through research.

. . . To publish each year better and more complete details of Fenestra products, including such information as will prove most helpful to the profession.

FENESTRA* building products save time and cost in the field through quick, easy installation. Window frame and sash are factory assembled, prime painted and prepared for attachment of Fenestra locking handles, adjusters, screens and storm sash. Cutting and fitting are eliminated. There are no weights, cords or sliding mechanisms. Installation can be by unskilled workmen. Doors and door frames are prime painted and mortised, drilled and tapped for Fenestra template hardware. Doors and windows, complete with hardware, are carried in stock by local dealers, for quick delivery to the building site when needed. Types and sizes are standardized to permit low selling prices through mass production.

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See Back Cover for Company's District Offices.

DETROIT STEEL PRODUCTS COMPANY

General Offices, 2250 East Grand Boulevard, Detroit 11, Michigan. Sales Offices in principal cities; factories in Detroit, Buffalo, Philadelphia, Oakland and Erie, Pa. Member of Producers' Council; affiliated with the American Institute of Architects. Copyright 1949, Detroit Steel Products Company.

MANUFACTURERS OF FENESTRA BUILDING PRODUCTS

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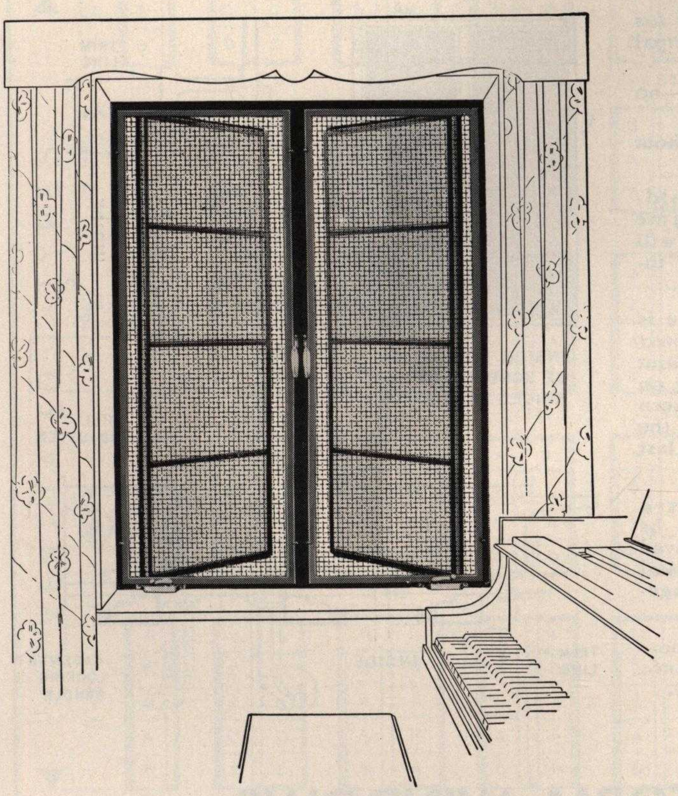
DECEMBER, 1949

RESIDENCE CASEMENTS



Residence Casement type 2424 with screens

FENESTRA Residence Steel Casement windows are used in houses of many sizes, types of construction, and styles of design; in apartments and housing projects, in dormitories and hotels; in various types of commercial buildings requiring fire-retarding materials.

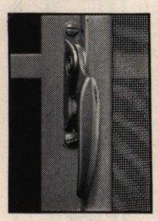
Their slender, graceful lines beautify both the outside and the inside. Units are easily combined to form large windows of distinctive charm. Muntin bars may be removed if desired to create "picture" windows.

Many conveniences are provided: more daylight, better ventilation, superior weather-tightness, better storm windows, etc., as pictured below. Vents that swing instead of slide, made of steel (no warping, swelling, sticking) make easy operation permanent.

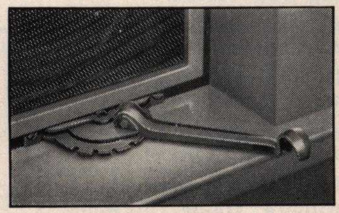
Exterior beauty is preserved by use of inside screens and storm windows almost invisible from outdoors. They are attached or removed quickly, safely, without ladders. Protected from weather and dirt, they last a lifetime. Identical sizes are interchangeable, need no marking or numbering. They offer no interference to operation of ventilators.

Fenestra's Bonderized finish protects from rust and makes factory priming paint last 3 to 5 times longer. Repainting is reduced.

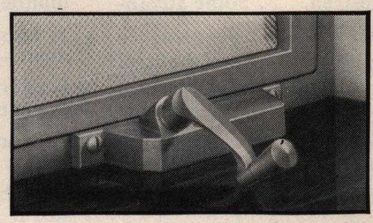
ATTRACTIVE, EFFICIENT HARDWARE



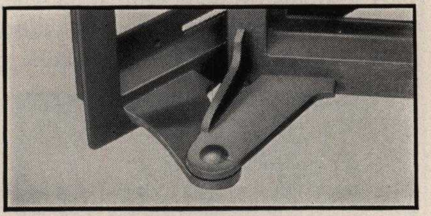
Handle Part 7-E



Lever Adjuster Part 9-E



Roto Adjuster Part 10-E



Hinge Part 202

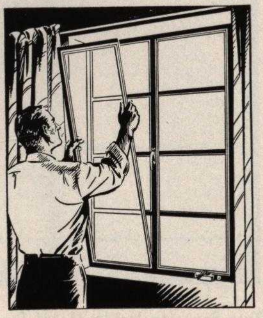
SOME ADVANTAGES OF FENESTRA CASEMENTS

More Daylight

Better Ventilation

Easier Opening

Better Screens



Better Storm Windows

INSIDE METAL SCREENS

ALL FENESTRA Residence Casements are factory prepared for the attachment of Fenestra Metal Screens. Some principal features of Fenestra Metal Screens include:

Attachment—quickly and safely, to inside face of casement—no ladder climbing.

Operation—all ventilators can be opened, closed or locked without touching screens.

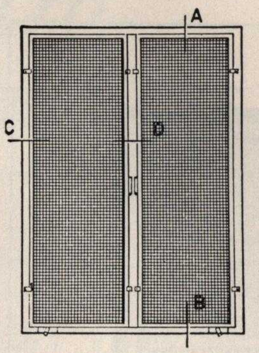
Inside Screens are easily and safely attached.

Protection—the cold-rolled steel frame always fits tight; it will not warp to allow insects to enter.

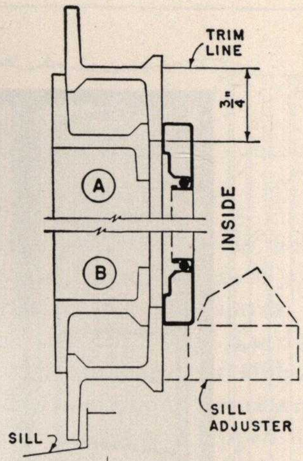
Maintenance—frame is Bonderized to protect against rust, then paint is baked on. Being on the inside, the screen is protected from the weather—it will last a lifetime.

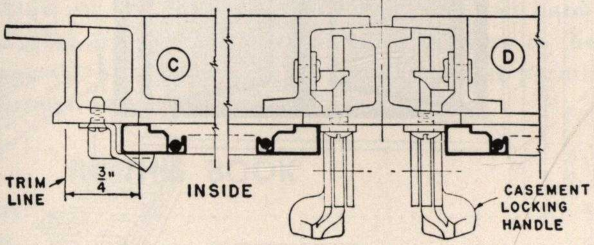
Storage—Fenestra Screens need not be marked when removed for storage; identical sizes are interchangeable.

Appearance—their narrow, steel frames do not mar window beauty.



INSIDE ELEVATION OF SCREENS ON SIDE-HINGED VENTILATORS

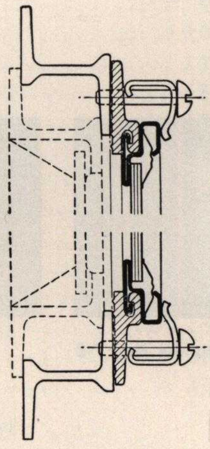




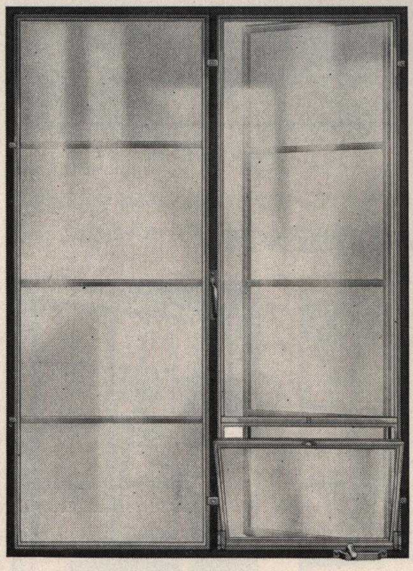
INSIDE METAL STORM WINDOWS

FENESTRA Storm Windows reduce heating costs, provide greater comfort in cold weather, and minimize condensation on window glass. Models with tilt-in sill ventilators (available at extra cost) offer draftless fresh-air ventilation when desired. . . . Some advantages over other types of storm windows include—

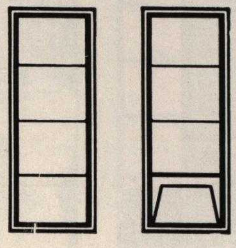
1. A quality product made by the same company that makes the steel casements and screens, as part of a *complete* window unit. Especially designed to provide most satisfactory results on Residence Casements at an economical price.
2. Completely glazed and packaged.
3. Safely and easily put up from inside the room—ladder climbing eliminated.
4. Units are interchangeable in same-size windows—need no numbering when stored.
5. Lies flat against inside of casement—does not rest on stool.
6. Hardly noticeable from inside the room.
7. Nothing to mar architectural beauty of exterior of home.
8. Rubber gasket, attached to storm window frame, prevents metal-to-metal contact with casement, seals whole opening.
9. Bonderized, with factory baked-on paint.
10. Protected from the weather—will last a lifetime.



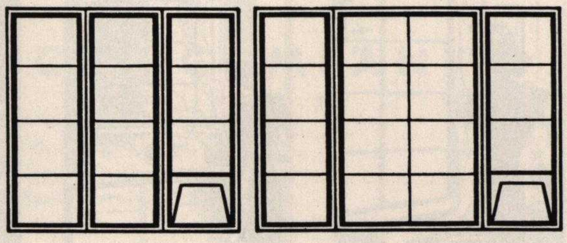
SECTION



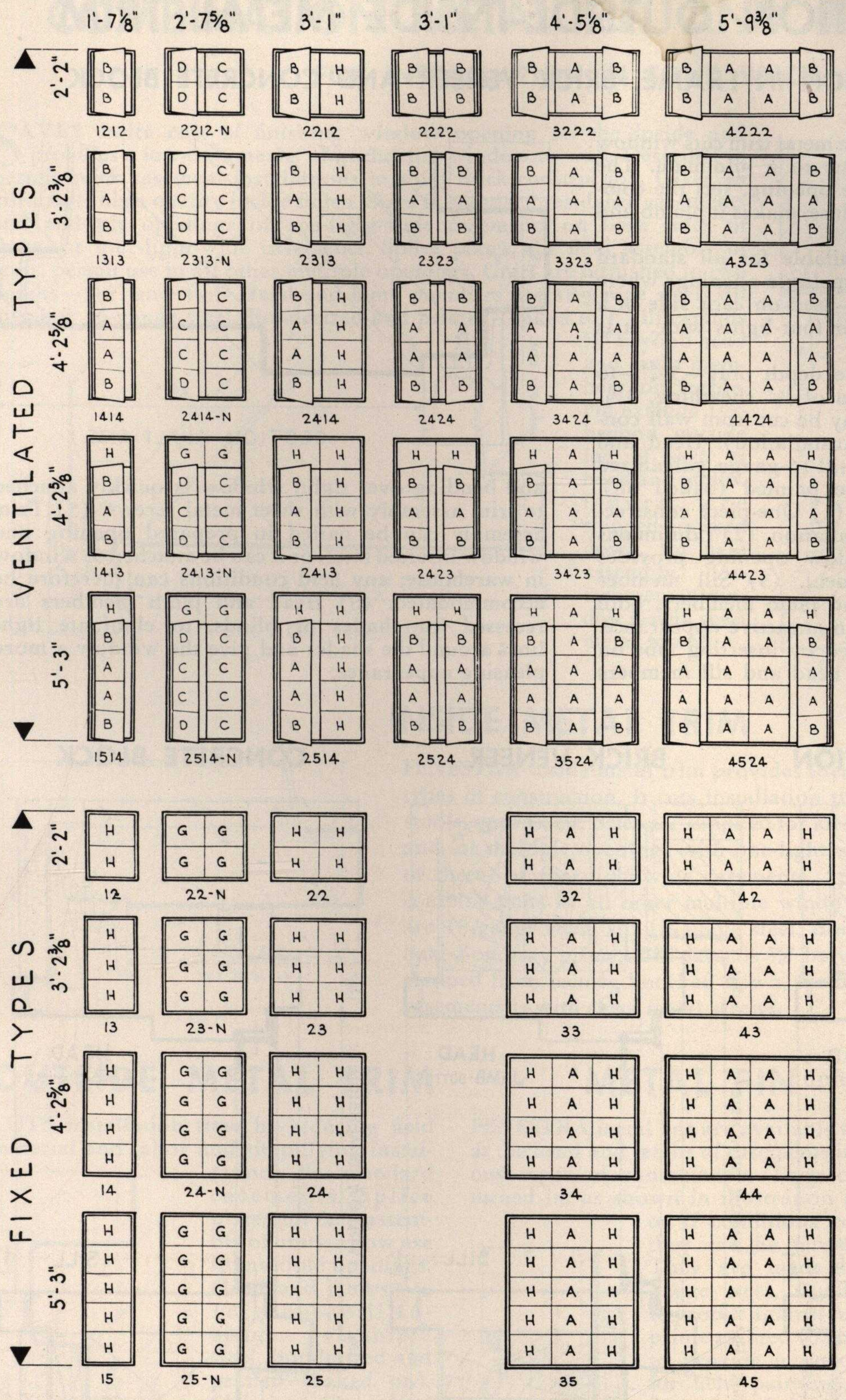
Two Fenestra Inside Metal Storm Window units (one with sill ventilator) on a 2414 casement.

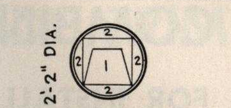


Storm Windows are supplied with or without vents.



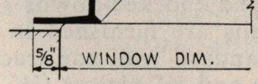
Two possible ways of combining ventilating and non-ventilating units on three-light wide and four-light wide casement windows.



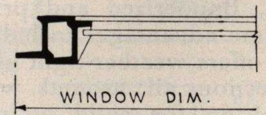


33111 BULLSEYE
WITH PROJECTED-IN VENT

GLASS FOR BULLSEYE	
1	15¼" × 15¼"
2	3½" × 16¾" CUT TO TEMPLATE



FRAME OF BULLSEYE



FRAME OF ALL TYPES
EXCEPT BULLSEYE

GLASS SIZES	
Letter	Sizes
A	16" x 12"
B	16" x 11 5/16"
C	14" x 12"
D	14" x 11 5/16"
G	14¾" x 12"
H	17¼" x 12"

ALL TYPES SHOWN ARE AVAILABLE FOR SHIPMENT FROM WAREHOUSES. UNITS MAY BE USED ALONE OR IN COMBINATION. VENTILATED UNITS WITH SINGLE SWING LEAF MAY HAVE HINGES ON EITHER RIGHT OR LEFT SIDE (VIEWED FROM OUTSIDE). DIMENSIONS SHOWN ARE ACTUAL WINDOW SIZES. FOR CLEARANCE TO MASONRY OR ROUGH OPENING, SEE INSTALLATION DETAILS.

RESIDENCE CASEMENTS—STOCK TYPES AND SIZES

RE-119

Above types and sizes are for Eastern territory. For types and sizes for West Coast region (*Washington, Oregon, California, Idaho, Nevada, Utah and Arizona*) consult a local representative.

COMBINATION OUTSIDE-INSIDE METAL TRIM

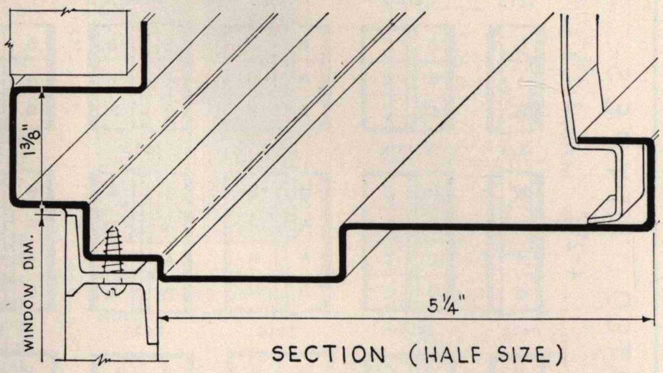
FOR INSTALLATION IN FRAME, BRICK VENEER AND CONCRETE BLOCK

FENESTRA'S outside-inside metal trim cuts window installation time and costs to a minimum. The builder merely roughs in the opening, sets the completely trimmed window in place, makes it plumb and true, and nails to sheathing.

Outside-inside trim is available for all standard residence casements and for multiple openings where a one-light-wide casement is used on each side of a casement three-lights wide or four-lights wide. It is shipped knocked-down.

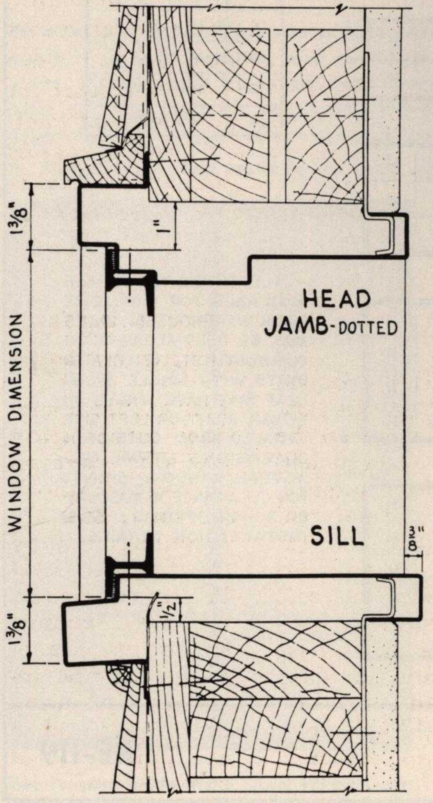
Units are furnished in one depth only—5¼″—to fit standard wall construction of ¾″ sheathing, 3⅝″ studs and ¾″ plaster (½″ may be cut from wall construction without affecting installation). Head and jamb members are 18-gauge, sill 16-gauge, galvanized steel, Bonderized and prime painted (baked on).

Some advantages include: (1) One-piece construction offers weather-tight installation. (2) Continuous projection all around window opening provides metal fin for solid attachment. (3) Sill member extends ⅜″ beyond head and jamb members, both inside and outside, to give an attractive appearance. (4) Frame is easily assembled by inserting tabs on jamb members into slots in head and sill members and bending over tight; window is quickly attached to trim assembly with sheet metal screws. (5) Trim assembly can be nailed in prepared opening and window inserted later, or it can be attached to window in warehouse; any field conditions can therefore be accommodated. (6) Head and jamb members are recessed for shades or blinds, to eliminate light lines around the shades and give the window a more pleasing appearance.

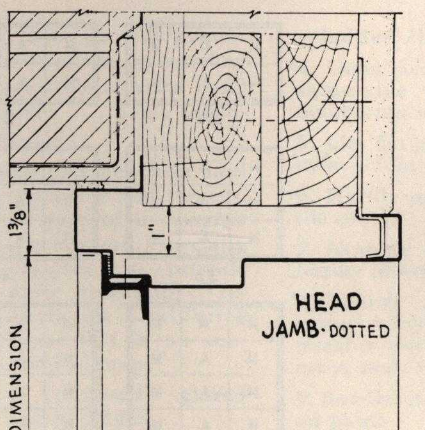


SECTION (HALF SIZE)

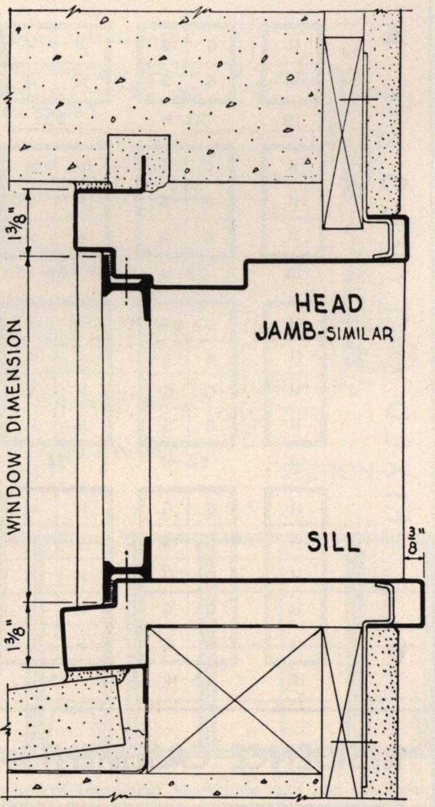
FRAME CONSTRUCTION



BRICK VENEER



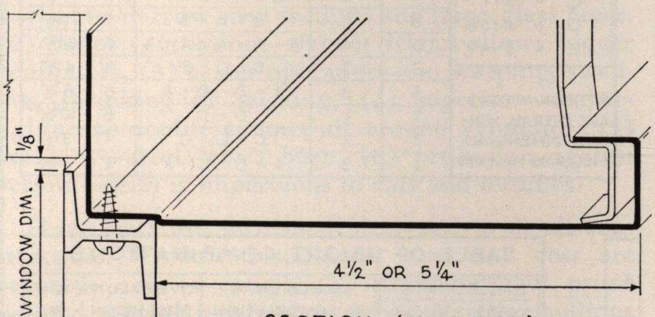
CONCRETE BLOCK



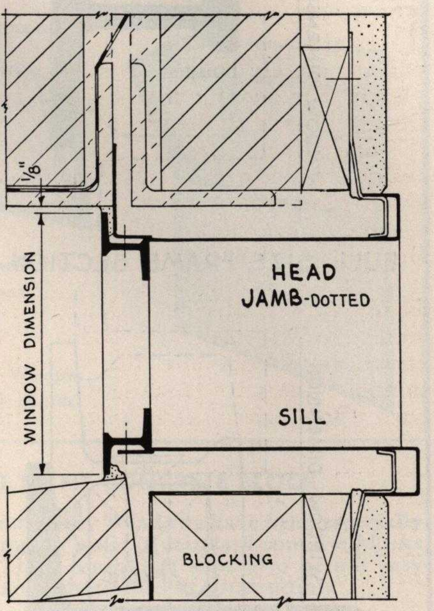
COMBINATION METAL FIN AND INSIDE TRIM

FOR INSTALLATION IN SOLID BRICK

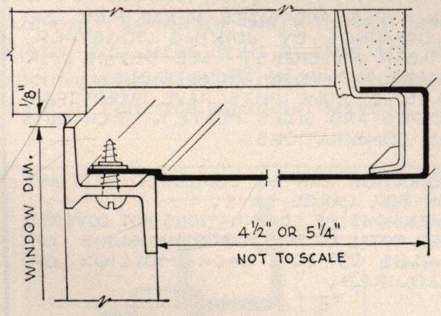
SAVES entire cost of finishing window opening on the inside and provides a low-cost means of anchoring window to wall. Designed to permit quick casement installations in solid brick construction. Gives an attractive, high quality inside finish. Sizes fit standard residence casements and multiple openings of one-light-wide casements on both sides of three- or four-light-wide casements. Splice plates, for field assembly of units, permit use in all other multiple openings. Units are furnished in two depths—5¼″ and 4½″. Head and jamb members are 18-gauge steel, sill member 16-gauge steel, Bonderized and primed (baked on). Sill extends ⅜″ beyond head and jamb members on inside. Fin extends 1½″ beyond outside leg of sash at head and jambs. Units are shipped knocked down, for field assembly. Attachment to window is with sheet metal screws.



SECTION (HALF SIZE)



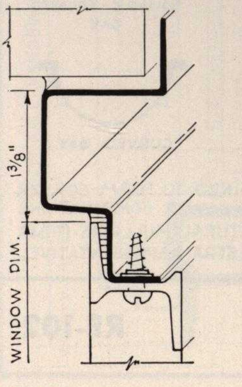
INSIDE METAL TRIM



FENESTRA inside metal trim provides ideal interior installations in all types of construction. It cuts installation time and costs by eliminating stools, aprons, etc. Sizes are supplied for all standard residence casements and for multiple openings with one-light-wide casements on both sides of three- or four-light-wide casements. Splice plates are furnished to combine units in all other multiple window openings. Head and jamb are 18-gauge steel, sill 16-gauge steel, Bonderized and given a coat of baked-on gray primer. Sill extends ⅜″ beyond head and jambs. Trim is shipped from factory knocked down, for field assembly. Attachment to casements is with sheet metal screws.

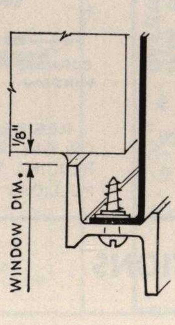
OUTSIDE METAL TRIM

CUTS installation time by reducing field material and labor and simplifying installations. For standard casements. Splice plates, for field assembly of units, allow use in multiple openings. Head and jambs are 18-gauge, sill 16-gauge, galvanized steel, Bonderized and primed (baked on). Shipped knocked down; attached to casement with sheet metal screws.



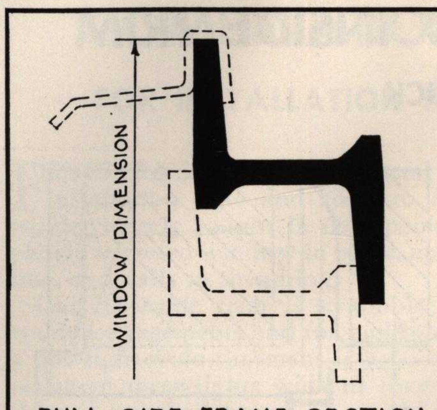
METAL FIN

FENESTRA metal fins are available for use at the head and jambs of casements in various types of construction. They can be turned in, as shown in illustration at left, or if conditions require, they can be turned out. They are made of 16-gauge steel, Bonderized to protect against rust and prime painted (baked on) to provide a good base for field painting. They are shipped knocked down, for field assembly. Attachment to casement is with sheet metal screws.

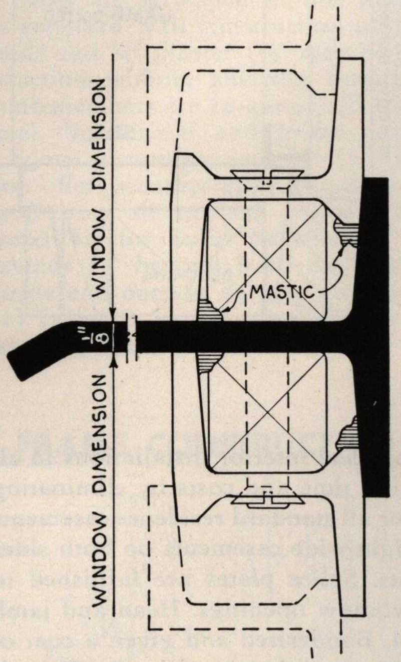


OTHER INSTALLATION METHODS

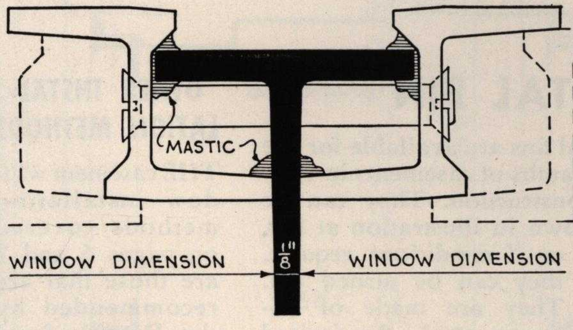
THE casement window installation methods covered on pages 6 and 7 are those that are recommended by the Detroit Steel Products Company. However, Fenestra Residence Casements may be installed in many other ways and in any other type of construction.



FULL SIZE FRAME SECTION

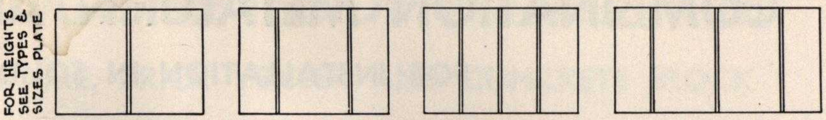


TRANSOM BAR (HORIZ. MULL.)



VERTICAL T-BAR MULLION

T-BAR MULLIONS OR TRANSOM BARS SHOWN ABOVE ARE FOR COMBINATIONS OF UNITS IN THE SAME PLANE ONLY. CONSULT D.S.P. Co. IF MULLIONS OF OTHER TYPES ARE REQUIRED.



SOME TYPICAL WIDTH COMBINATIONS OF UNITS
SEE TABLE BELOW FOR OTHER ARRANGEMENTS AND FOR OVERALL WIDTH DIMENSIONS.

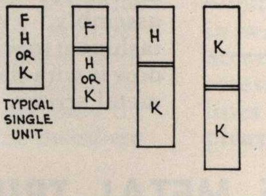
SINGLE WINDOW UNITS SHOWN ON TYPES AND SIZES PLATE MAY BE COMBINED TO FILL WIDER WINDOW OPENINGS BY JOINING TOGETHER WITH VERTICAL T-BAR MULLIONS (SEE DETAIL). A FEW TYPICAL WIDTH COMBINATIONS ARE SHOWN IN TABLE. WIDTH COMBINATIONS SHOWN SHOULD INCLUDE ONLY UNITS OF THE SAME GLASS HEIGHTS.

WIDTH COMBINATIONS WITH T-BAR MULLIONS

WIDTHS OF SINGLE UNITS	
SYMBOL	WIDTH
A	1'-7⅛"
B	2'-7⅝"
C	3'-1"
D	4'-5⅛"
E	5'-9⅜"

UNITS WIDE	VERT. MULLS.	ARRANGEMENT OF UNITS IN OPENING	OVERALL * WIDTH DIM.
3	2	A - B - A	5' - 10⅛"
2	1	C - C	6' - 2⅛"
3	2	A - C - A	6' - 3½"
4	3	A - A - A - A	6' - 4⅞"
3	2	B - B - B	7' - 11⅛"
5	4	A - A - A - A - A	8' - 0⅛"
3	2	B - C - B	8' - 4½"
4	3	A - B - B - A	8' - 5⅞"
2	1	D - D	8' - 10⅜"
3	2	C - C - C	9' - 3¼"
4	3	A - C - C - A	9' - 4⅝"

* THESE WIDTHS ARE OVERALL WINDOW DIMENSIONS INCLUDING MULLIONS



TYPICAL HEIGHT COMBINATIONS

TABLE OF HEIGHT COMBINATIONS

SINGLE UNITS	
SYMBOL	HEIGHT
F	2'-2"
H	3'-2⅜"
K	4'-2⅝"

SINGLE UNITS IN COMBINATION	OVERALL HEIGHT DIMENSION *
F + H	5' - 4½"
F + K	6' - 4¾"
H + K	7' - 5⅛"
K + K	8' - 5⅜"

* OVERALL WINDOW DIMENSIONS INCLUDING MULLIONS.

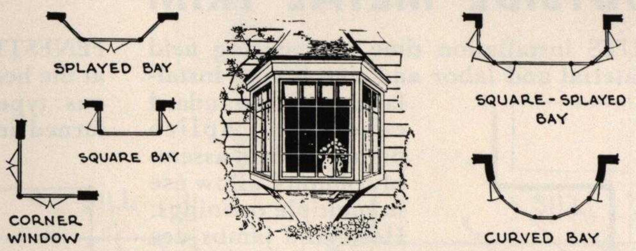
SINGLE WINDOW UNITS SHOWN ON TYPES AND SIZES PLATE MAY BE COMBINED TO FILL HIGHER WINDOW OPENINGS BY JOINING TOGETHER WITH TRANSOM BARS (HORIZONTAL T-BAR MULLIONS) - SEE DETAIL. A FEW TYPICAL HEIGHT COMBINATIONS ARE SHOWN IN ABOVE TABLE.

SOME 4'-2⅝" HIGH UNITS AND ALL 5'-3" HIGH UNITS HAVE FIXED TRANSOMS IN SWING LEAF TYPES (SEE TYPES AND SIZES PLATE). SUCH UNITS ARE NOT RECOMMENDED IN VERTICAL COMBINATIONS.

ANY WIDTH COMBINATION CAN BE COMBINED WITH ANY HEIGHT COMBINATION FOR LARGE BAYS.

FOR OVERALL DIMENSIONS OF COMBINATIONS NOT COVERED IN TABLES ABOVE, ADD TOTAL OF WINDOW DIMENSIONS OF UNITS INCLUDED, PLUS ⅛" FOR EACH MULLION OR TRANSOM BAR REQUIRED.

COMBINATIONS FOR BAY AND CORNER WINDOWS



RESIDENCE CASEMENTS MAY BE COMBINED TO FORM CORNER OR BAY WINDOWS AS SUGGESTED ABOVE. SUCH COMBINATIONS REQUIRE THE USE OF PIPE, WOOD OR STRUCTURAL MULLIONS (T-BAR MULLIONS CANNOT BE USED). CONSULT FENESTRA REPRESENTATIVE.

RESIDENCE CASEMENTS—COMBINATIONS RE-102

BASEMENT AND UTILITY WINDOWS

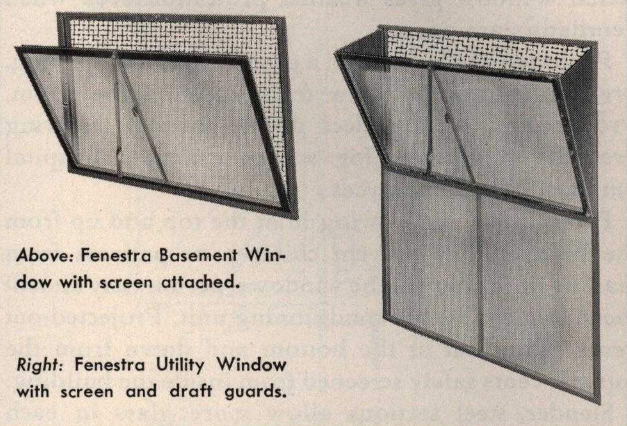
SOLD EXCLUSIVELY THROUGH DEALERS

BASEMENT WINDOWS. Quality products, new in design, made of hot-rolled Residence Casement sections. Lever-type locking handle assures easy, positive locking action. Ventilator opens in at top, deflecting drafts upward; can be easily removed for glazing. Fenestra all-metal screens are available. Storm panel inserts, for use in conjunction with Fenestra screens, are also available.

Advantages over other windows include (1) more daylight—narrow steel sections and large glass areas, (2) better ventilation—slender frame allows bigger ventilators, (3) easier operation—no warping, swelling, shrinking or sticking, (4) superior weathertightness—double contact all around ventilator, (5) firesafety—steel won't burn, (6) protection against vermin—steel is impervious to rats and termites.

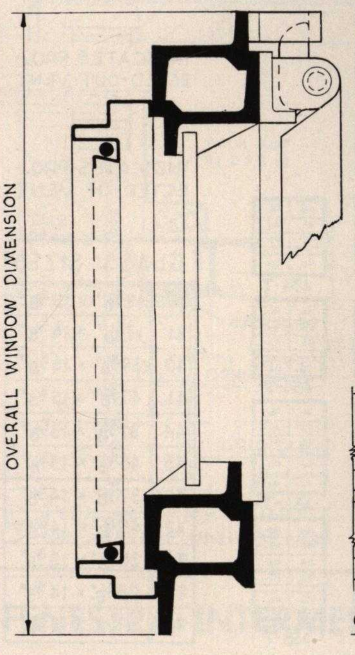
Three sizes are furnished, designed to fit all construction. Window installation time and cost are reduced—unit is completely assembled and prime painted, with all hardware attached. Vertical mullions are available.

UTILITY WINDOWS. Similar to Basement Windows but with fixed lights below ventilator. Made of hot-rolled Residence Casement sections. Furnished in one size only. Ideal for dairy barns, basement areaways, shops, etc. Steel draft guards are available to close openings at sides. Windows are prepared for attachment of Fenestra all-metal screens.



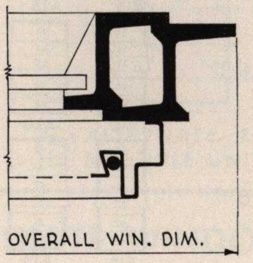
Above: Fenestra Basement Window with screen attached.

Right: Fenestra Utility Window with screen and draft guards.



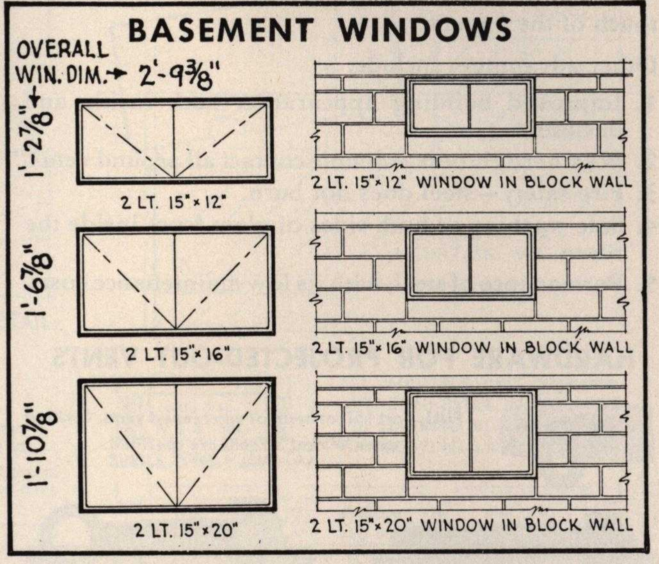
Left: Vertical section at head and sill of Basement Window. Head of Utility Window similar.

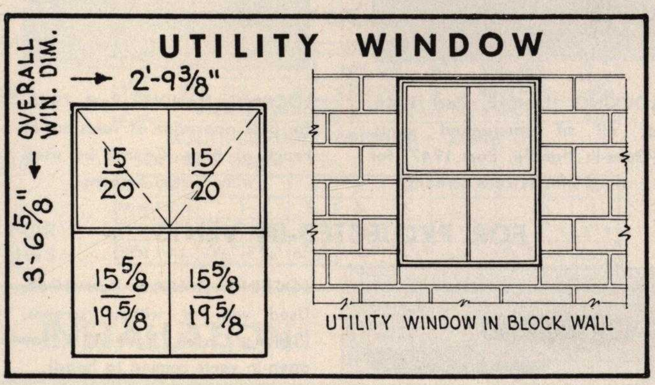
Below: Section showing jamb of Basement and Utility Window.



DESIGNED TO FIT CONCRETE BLOCK

Fenestra Basement and Utility Windows have been especially designed to fit openings in walls of standard concrete blocks (*see sketches below*). Their convenient sizes also permit easy installation in the many other kinds of construction.





INTERMEDIATE PROJECTED WINDOWS

PREFERRED in the modern school, hospital and business building, the Fenestra Intermediate Projected Window gives weather protection even when ventilators are open.

Projected-out vents form a canopy over the opening, preventing rain or snow from entering the room. Projected-in vents deflect drafts upward, assuring draftless ventilation for school children, hospital patients, office employees.

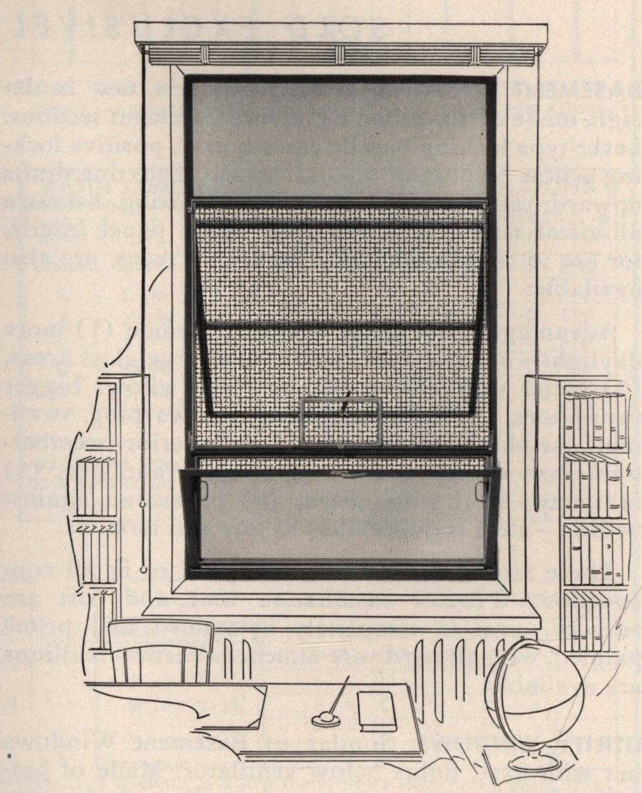
Projected-in vents swing in at the top and up from the bottom; they prevent children or patients from leaning or falling out the windows; permit easy attachment of movable air-conditioning unit. Projected-out vents swing out at the bottom and down from the top. All vents safely screened from inside the building.

Slender steel sections allow more glass in each window opening. A better view of the outdoors is provided. More daylight and sunshine are admitted to provide cheerier rooms.

Intermediate Projected Windows open and close in any weather—steel does not warp, swell, shrink or splinter. Vent operation is silent, easy—at the mere touch of the fingers.

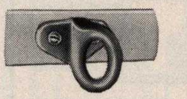
Other advantages include:

1. Improved building appearance, both inside and outside.
2. Weathertightness—double contact all around vents.
3. Fire-safety—steel does not burn.
4. Safe washing of both sides of glass from inside the room.
5. Permanence of steel, with its low maintenance costs.

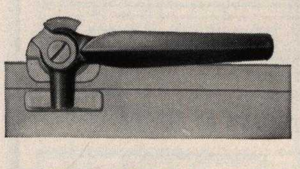


Intermediate Projected Window, Type 415, with screens

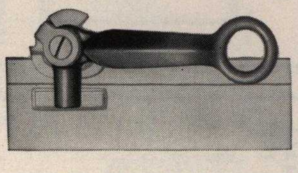
HARDWARE FOR PROJECTED-OUT VENTS



PULL, Part 151, at head of unscreened vents. Omitted when Wicket Screens are specified.

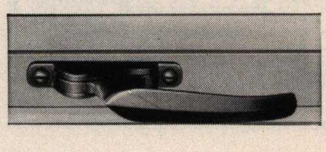


LOCKING HANDLE, Part 1946, at sill of unscreened vents. (Close-In Handle, Part 1947, for vents with Wicket Screens.)



LOCKING HANDLE, Part 1948, for pole operation of vents out of reach of floor. Cannot be used with Wicket Screens.

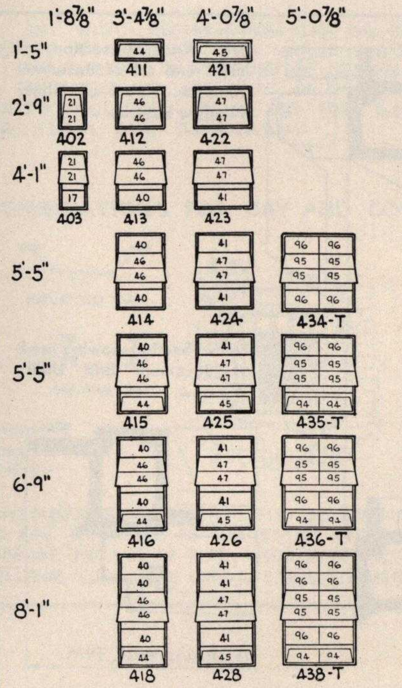
FOR PROJECTED-IN VENTS

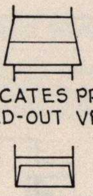


LOCKING HANDLE, Part 1945. Used with or without screens. (Spring Catch, Part 739, for open-in vents coming to head).

STOCK TYPES AND SIZES

(All stock types are Bonderized)



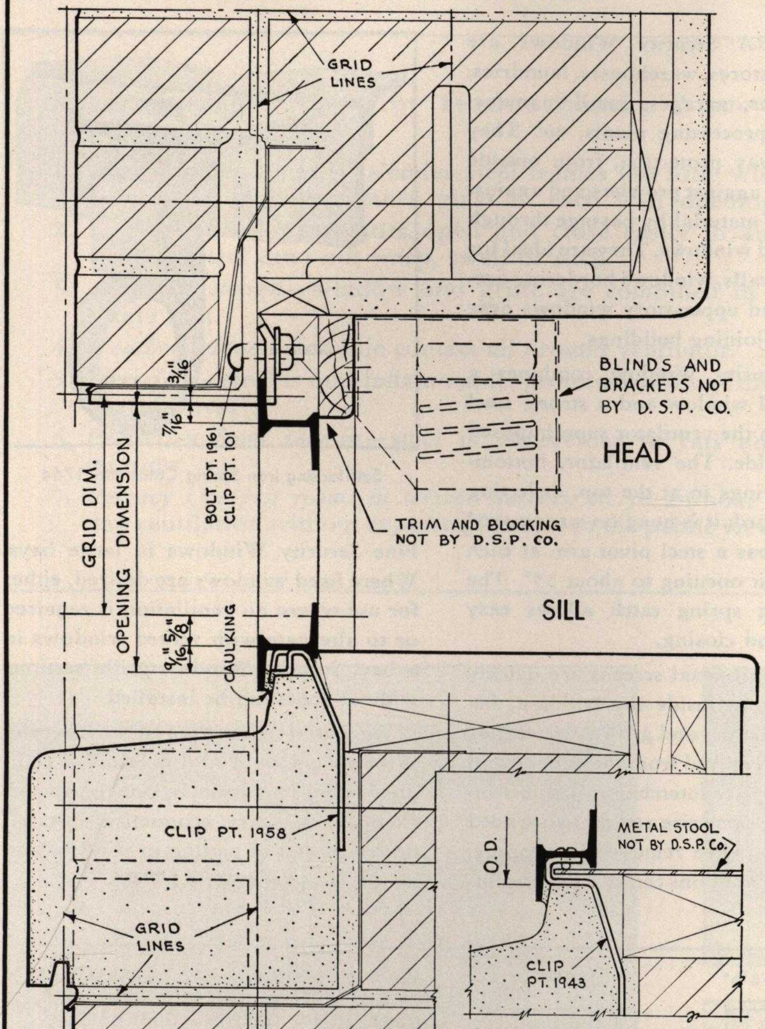


INDICATES PROJECTED-OUT VENT

INDICATES PROJECTED-IN VENT

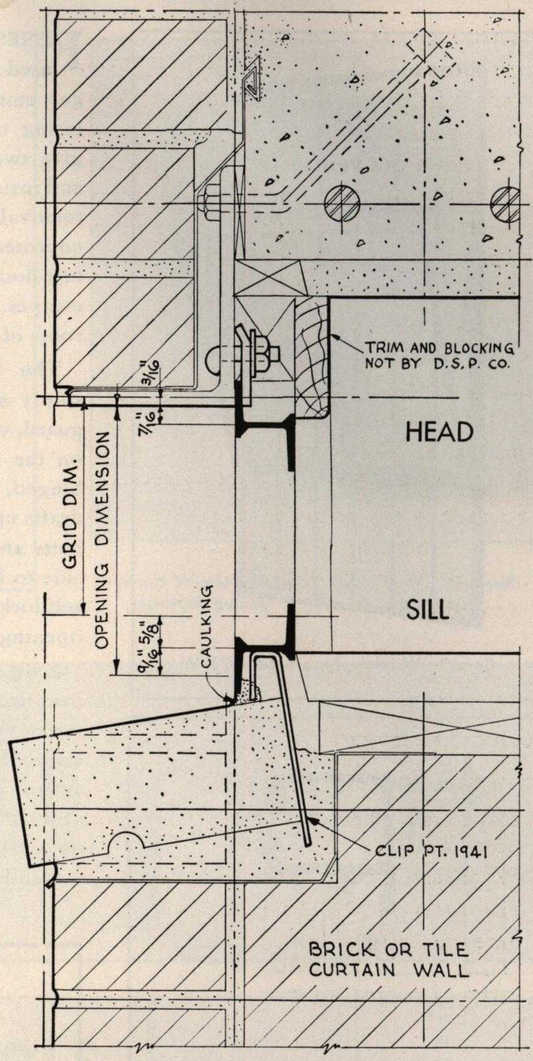
GLASS SIZES	
17	19⅜" × 15⅝"
21	17⅝" × 14⅝"
40	39⅜" × 15⅝"
41	47⅜" × 15⅝"
44	37⅝" × 13⅝"
45	45⅝" × 13⅝"
46	37⅝" × 14⅝"
47	45⅝" × 14⅝"
94	28⅝" × 13⅝"
95	28⅝" × 14⅝"
96	29⅝" × 15⅝"

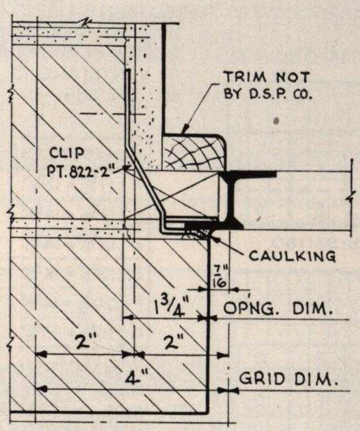
SOLID BRICK WALL



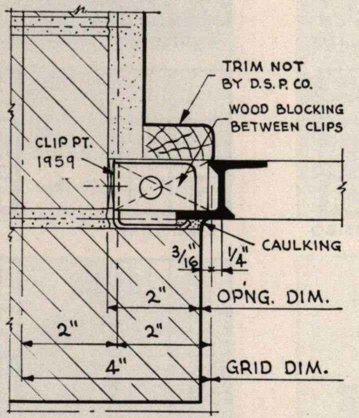
ALTERNATE SILL DETAIL

STRUCTURAL CONCRETE

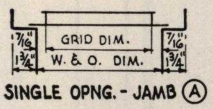




Ⓐ TYPICAL JAMB—SINGLE OR MULTIPLE UNIT OP'NGS

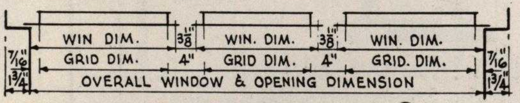


Ⓑ ALTERNATE JAMB FOR MULTIPLE UNIT OP'NGS

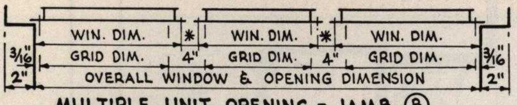


SINGLE OPNG. - JAMB Ⓐ

ALL MULTIPLE UNIT OPENINGS WITH JAMB DETAIL "A" WILL HAVE 3 1/8" STANDARD MULLION SPACING FOR MODULAR LAYOUTS.



MULTIPLE UNIT OPENING - JAMB Ⓐ



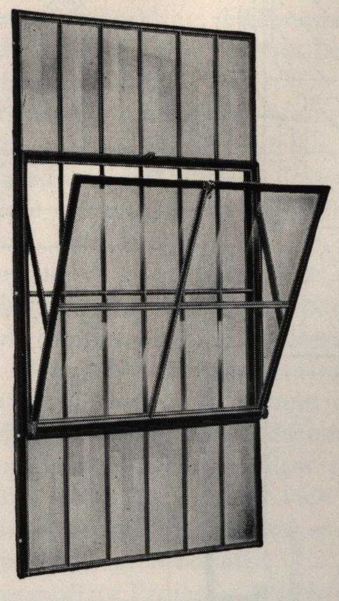
MULTIPLE UNIT OPENING - JAMB Ⓑ

* SEE TABLE BELOW

NO. OF WIN'S.	2	3	4	5	6	7	8	9	10
NO. OF MULL'S.	1	2	3	4	5	6	7	8	9
SINGLE MULL.	2 5/8"	2 7/8"	3" -	3"	3" +	3" +	3" +	3" +	3" +
TOTAL MULL.	2 5/8"	5 3/4"	8 7/8"	1'-0"	1'-3 1/8"	1'-6 1/4"	1'-9 3/8"	2'-0 1/2"	2'-3 5/8"

FENESTRA INTERMEDIATE WINDOWS—INSTALLATION AR-210

SECURITY WINDOWS



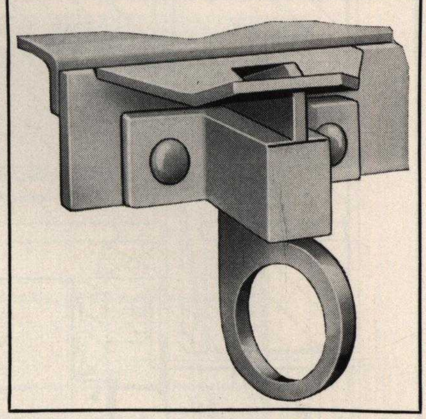
Security Window, type S-641121-W.

FENESTRA Security Windows are used in stores, warehouses, laundries, gas stations, garages, small manufacturing or processing plants, etc. They give two-way protection, from outside and inside, against prowlers and against removal of material by passage through unprotected windows. They are ideal for first-floor walls, windows bordering fire-escapes, and upper-story windows near roofs of adjoining buildings.

The Security Window combines a sturdy steel window and a strong steel guard, with the ventilator superimposed on the inside. The ventilator, bottom-hinged, swings in at the top, deflecting drafts upward; it is hung on strong steel butts and has a steel pivot arm at each side to limit opening to about 35°. The self-locking spring catch allows easy opening and closing.

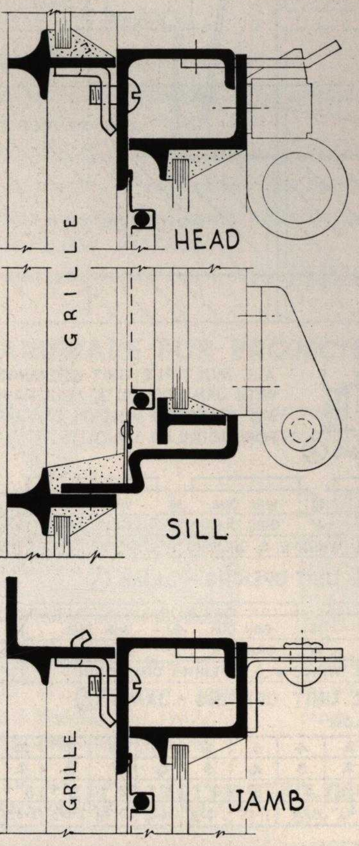
Fenestra all-metal screens are quickly installed from inside the building, between ventilators and grilles, where they cannot be removed from the outside and stolen. They are interchangeable in windows of the same size and therefore need no marking when removed for storage.

Standard mullions can be used to combine Security Windows in large bays. Where fixed windows are desired, either for use where no ventilation is required or to alternate with vented windows in a bay, Security Window grille sections without vents can be installed.

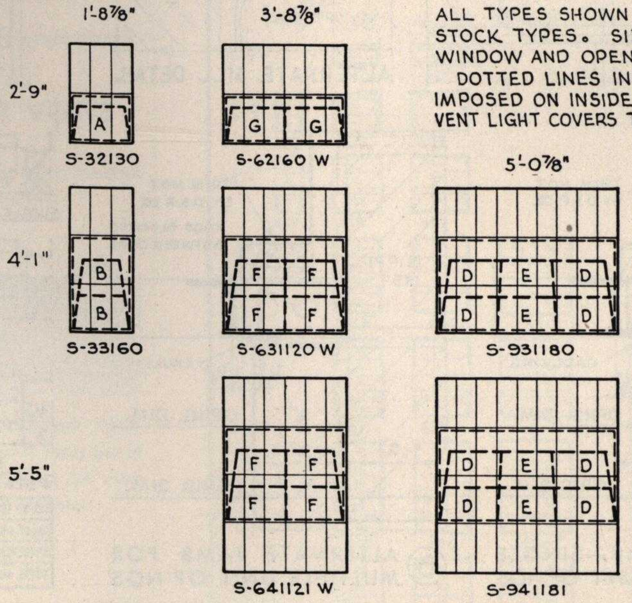


Self-locking iron Spring Catch, No. 1764

The initial cost of the Fenestra Security Window is low. And it is installed complete in one operation, by one contractor. Compare this easy, economical installation with that of putting in window and guard, each separately.



SECTIONS THROUGH SUPERIMPOSED VENT



ALL TYPES SHOWN ARE WAREHOUSE STOCK TYPES. SIZES SHOWN ARE WINDOW AND OPENING DIMENSIONS.

DOTTED LINES INDICATE VENTS SUPERIMPOSED ON INSIDE OF GRILLE. EACH VENT LIGHT COVERS THREE GRILLE LIGHTS. GRILLE LIGHTS DIRECTLY IN FRONT OF VENTS ARE TO BE LEFT UNGLAZED.

GLASS SIZES	
A	17⅝" × 13⅝"
B	17⅝" × 14⅝"
D	18⅝" × 14⅝"
E	19⅝" × 14⅝"
F	20⅝" × 14⅝"
G	20⅝" × 13⅝"

6¼" × 15⅝" FIXED IN 3 & 9 LIGHT WIDE UNITS.

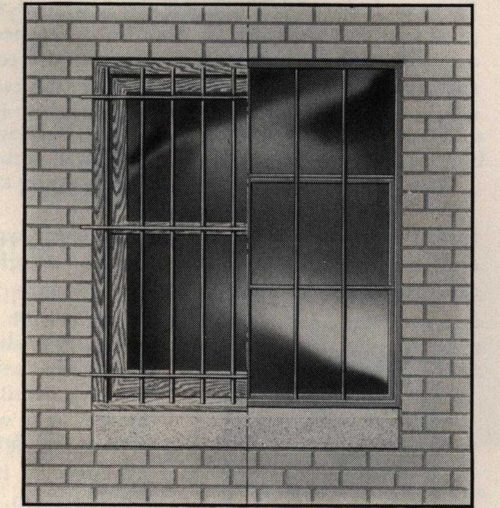
6⅞" × 15⅝" FIXED IN 6 LIGHT WIDE UNITS.

SECURITY WINDOWS–TYPES–SIZES IND-403

SECURITY WINDOWS

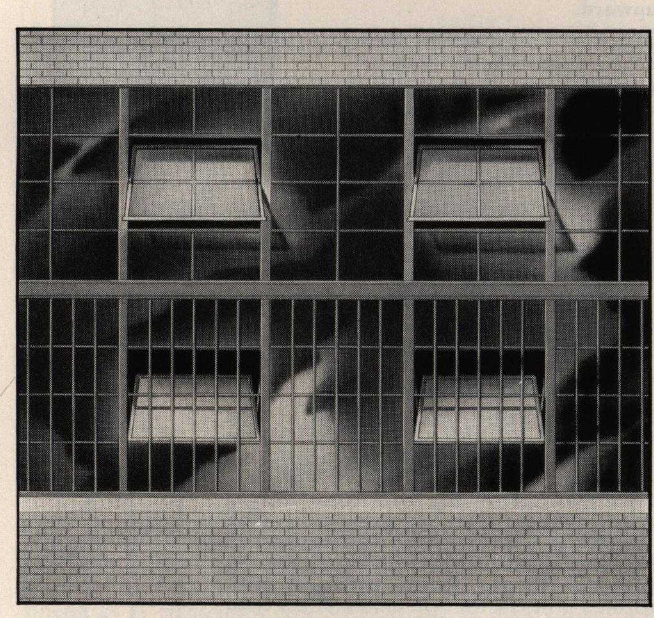
Some advantages offered by Fenestra Security Windows include—

1. *More daylight*—sturdy, slender steel frames use little window space, allowing more glass in each wall opening.
2. *Easy operation*—ventilators open and close easily in any weather; steel does not warp, swell or stick.
3. *Attractive design*—window and grille are combined in a single unit.
4. *Weathertightness*—double contact all around ventilator.
5. *Firesafety*—steel is non-inflammable, protects building from nearby fires.
6. *Protection from vermin*—steel is impervious to rats and termites.
7. *Privacy* (*for rest rooms in service stations, etc.*)—24-hour a day ventilation without exposing interior to the public view.

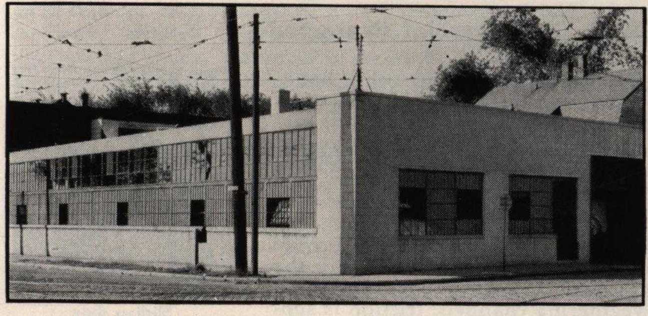


Wood Window with separate guard.

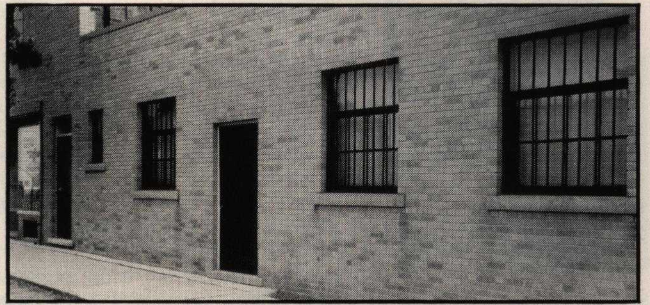
Security Window with integral guard.

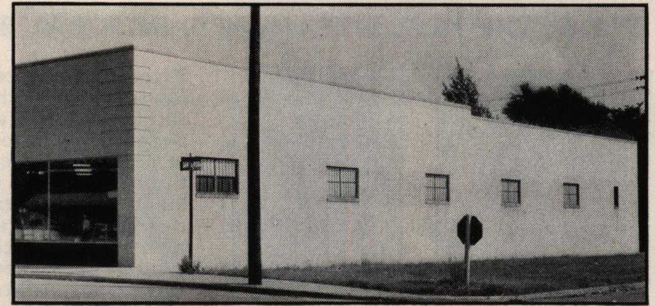


Security Windows in lower elevation combined with Pivoted Windows in upper elevation (see the illustration below).



Security Windows, below, combined with Pivoted Windows, above.





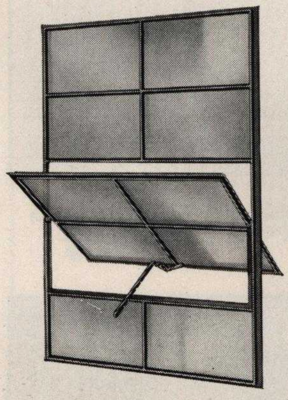
Three Security Window installations in different types of buildings.

INDUSTRIAL WINDOWS

Fenestra Industrial Windows, the first steel windows to be produced commercially in America, have been consistently accepted as the standard for industrial and commercial construction of every description. They are the result of years of continuous development and improvement by experienced window engineers and craftsmen and are offered in a wide range of types and sizes conforming to modular standards. Fenestra's nation-wide staff of engineers is available at any time to assist in solving window problems and to provide detailed and properly designed window layouts for any job.

PIVOTED WINDOWS

Most widely used of all windows for every type of industrial and commercial building where ample daylight and fresh air are considered important. They are equally well suited for installation as relatively small, individual windows or in huge bays. Double contact between ventilator and frame assures tight weathering.



Pivoted Window
Type A25141

Mechanical operators are available to handle, from a single station, long and short runs of vents, in both horizontal and vertical bays.

Fenestra Pivoted Windows are made in a wide variety of types and sizes, to meet all design and construction requirements. Vertical and horizontal mullions are available for combining them to fill large openings.

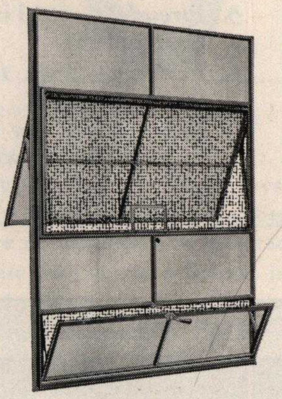
COMMERCIAL PROJECTED WINDOWS

For industrial and commercial buildings, particularly where abundant fresh air and *convenient screening and shading* are important. Made exactly like Pivoted Windows except for hanging of vents. Sizes of both types of windows are the same; they may be used together if desired.

Ventilators open entirely inside or outside the plane of the window. Open-out vents swing out at the bottom, forming a canopy; they can be opened even in bad weather. Open-in vents deflect drafts upward.

Mechanical operators may be used to operate runs of vents from a single station.

Screens are available, for quick and safe attachment from inside the building.

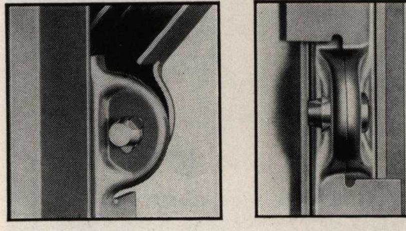


Commercial Projected Window
Type A2522402

7 POINTS OF SUPERIORITY OF FENESTRA INDUSTRIAL WINDOWS

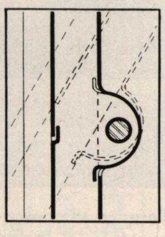
1. METHOD OF HANGING VENTILATORS

1-A. THE NEW, STREAMLINED, INTEGRAL BUTTS* (Pivoted Windows)



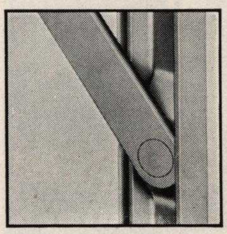
Two views of the new Pivoted Window butt

Pivoted vents are supported on tight-fitting butts formed as integral parts of the jamb weathering bars. Butt ears have drawn surfaces for neat appearance and close contact of moving parts, and drawn ribs for strength and rigidity and for surface bearing of pivot pin. Except for the pivot there are no parts protruding through the butt or through the jamb weathering members to affect the weathering features or interfere with condensation clearance to the sill frame bar. Strong electro-galvanized steel pivot pins fit snugly in formed holes of the butt ears and are held securely by swaged lugs pressed in the pin after assembly. Weathering is formed to provide overlapping surfaces, inside and outside, when vent is closed (*see right*).



Butt section

1-B. STRONGER, MORE EFFICIENT VENT HANGING (Commercial Projected)

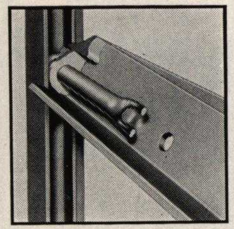


Balance arm

BALANCE ARMS. Each projected vent is equipped with two solid, band-edge steel balance arms, one at each jamb. These arms are designed to support the vent in conjunction with bronze friction shoes. One end of each arm is pivoted to the jamb member of the vent itself; the other end is pivoted to a bracket formed as an integral part of the ventilator jamb weathering member. Pivots are strong, bronze shoulder rivets designed to permit free action of the arms. Heads of the pivots are recessed flush with the face of arms.

BRONZE FRICTION SHOES. Each projected vent has two special, bronze friction shoes to support the vent in open positions in conjunction with the balance arms. Shoes are attached to the vent head member (open-out) or sill member (open-in) and slide in the frame weathering channels; friction is supplied by compression springs of heavy, rust-proofed steel wire. Brass housings

(*continued on next page*)



Sliding shoe

**Design patent applied for*

enclose the springs and support the shoes. Shoe end of housing projects through hole in extended end of vent jamb bar; upturned forked tips of other end are anchored by a lug pressed from the web of ventilator head or sill bar. Housing is easily detached if desired to adjust spring tension or to substitute springs of less tension when attaching mechanical operators.

(Note: All following points of superiority apply to both Pivoted and Commercial Projected Windows.)

2. ACCURATE MACHINING OF WINDOW BARS

Window bars (except muntins that do not frame ventilators) are machined in multiple series of dies accurately located and dowelled (or pinned) to adapter plates. Holes in the adapter plates for dowels of dies are located to 0.001″ limits. This machining assures bars with uniform cut-off dimensions and with pivot-slots and other punching properly spaced.

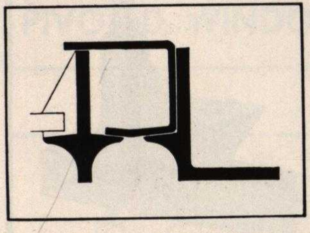
3. ACCURATE, AUTOMATIC ASSEMBLY OF VENTILATORS

Ventilators (except one-light-high projected vents) are assembled in a specially designed machine that holds all bars of ventilator rigidly clamped in correct position. Action of the machine automatically assembles all corners and muntin bars of the vent. All pivoted connections are simultaneously engaged, with hydraulic pressure of 5 to 6 tons applied to each pivot end, compressing the metal to completely fill pivot slots and "peen" over pivot ends, forming a rigid joint.

4. VENT JAMB BARS "RUN THROUGH"—Provide Vent Centering Feature

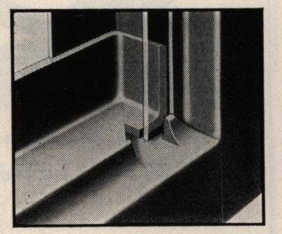
Jamb bars of ventilators extend past webs of head and sill vent bars; head and sill bars pivot into extended jamb bars. Web of jamb bar at sill of ventilator is shaped to guide into weep-notch on sill frame bar of vent opening and thereby center the vent in the opening. The centering feature aligns vent when closed, to aid in weathering and give a neat appearance. On projected vents, extended ends of jamb bars serve to support the sliding shoes, simplifying their attachment.

5. STRONG, TIGHT-WEATHERING SECTIONS



Section at jamb showing two point, continuous contacts

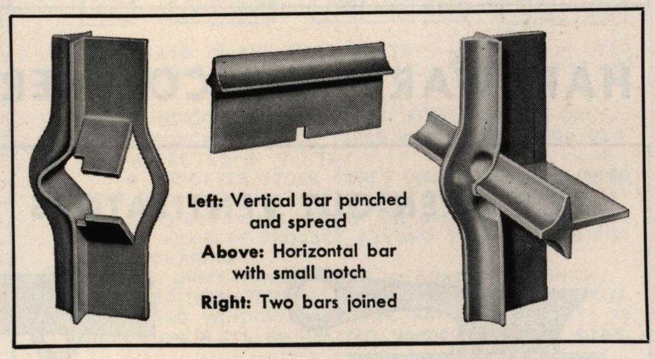
To assure greatest possible strength, all window sections of Fenestra Industrial Windows are solid steel bars, hot-rolled with vertex profile angles. Frame members are angle sections. Muntins are specially designed for mechanical interlocking. Tight weathering is assured by double contact all around between vent and frame, provided by weathering sections firmly spot-welded to window members. Weathering at the head has a long downstanding leg on the outside. Jamb weathering members are unequal-leg channels. To assure springiness, both jamb and head weathering sections are rolled without vertexes. Ends of sill weathering members are mitered and turned, forming a watertight closure. Condensation is guided to the outside through weep-notches in rebate of window frame member.



Corner of vent, showing end return of sill weathering

6. RIGID, INTERLOCKING MUNTIN JOINTS

The famous Fenestra joint, an exclusive feature of Fenestra Industrial Windows, makes possible the use of continuous muntins both vertically and horizontally and joins them so that strength is actually increased at the intersection. To form this joint a small slot is cut in the web of the vertical bar and a smaller notch in the horizontal bar (only 20% of metal from openings is removed). The vertical bar is then spread and threaded over the horizontal bar and the two are mechanically interlocked in a four-point closing die under great pressure. Since this joint retains 80% of the cross-sectional area of both bars, compared with a maximum of 50% in the ordinary mitered joint, it provides the strongest muntin intersection made. Continuous muntins also offer assurance against sagging sash and distorted, binding ventilators.



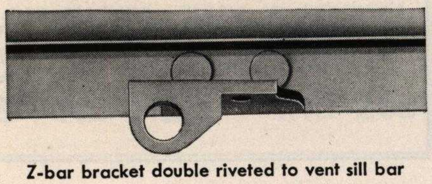
Left: Vertical bar punched and spread

Above: Horizontal bar with small notch

Right: Two bars joined

7. STRONG HARDWARE ATTACHMENT

Standard locking and operating hardware for pivoted and projected-out vents is attached to a steel Z-bar bracket double riveted to the web of the sill vent bar. This bracket is hot-rolled (not pressed), with vertex profile angles for maximum strength, and is designed to provide solid anchorage for operating hardware. Its vertical face has a hole for attachment of cam handle or spring catch and its upper projection acts as a stop for the handle and contains a second hole for attachment of stay bar for holding pivoted vents open.

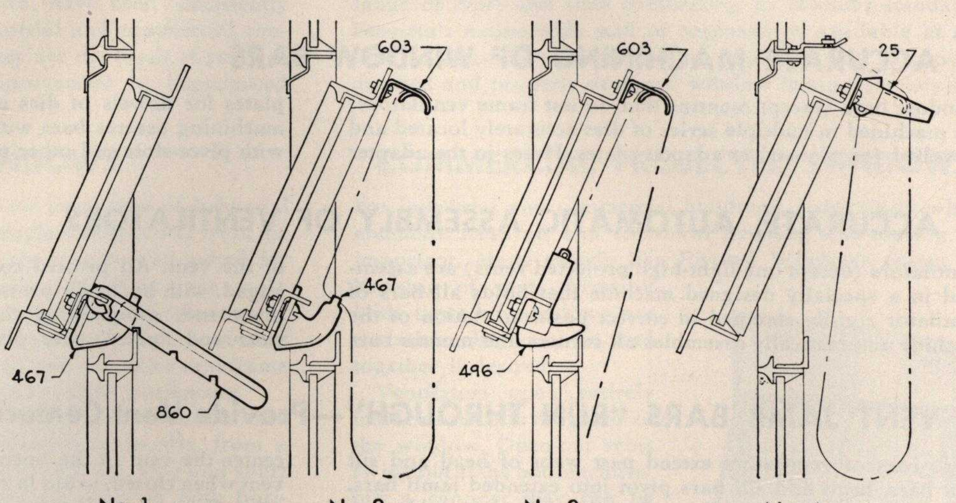


Z-bar bracket double riveted to vent sill bar

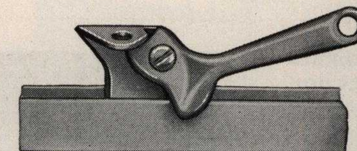
HARDWARE FOR PIVOTED WINDOWS

OPERATION METHODS

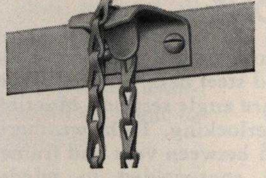
(1) Cam Locking Handle 467 and Stay Bar 860, for vents within reach of floor; (2) Chain attached to Handle 467 passes over guide at head of vent and loops down; (3) Chain attached to Spring Catch 496 passes over guide and loops down; (4) Chain attached to Spring Catch 25 at head loops back through guide of catch and is secured to keeper on frame.



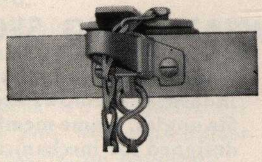
No. 1 No. 2 No. 3 No. 4



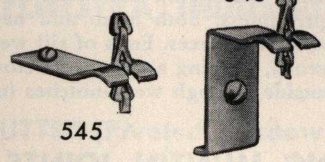
467 Cam Locking Handle
495-A Z-Bar Bracket



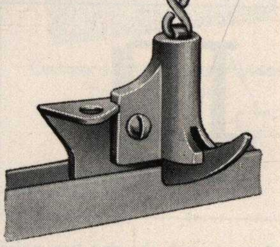
603 Chain Guide



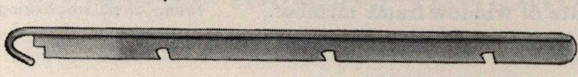
25 Spring Catch



Chain Cleats



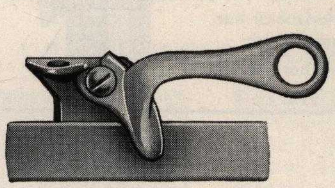
496 Spring Catch
495-A Z-Bar Bracket



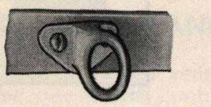
860 Stay Bar

HARDWARE FOR COMMERCIAL PROJECTED WINDOWS

FOR OPEN-OUT VENTILATORS



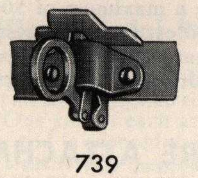
150 Cam Locking Handle
495-A Z-Bar Bracket



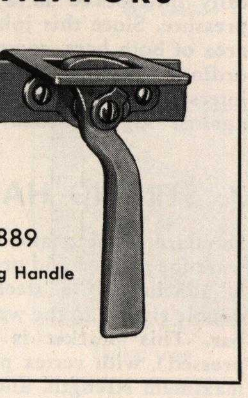
151 Pull

NOTE: When screens are specified for open-out vents, 151 pull is omitted from head of vent and 1756 cam handle used at sill.

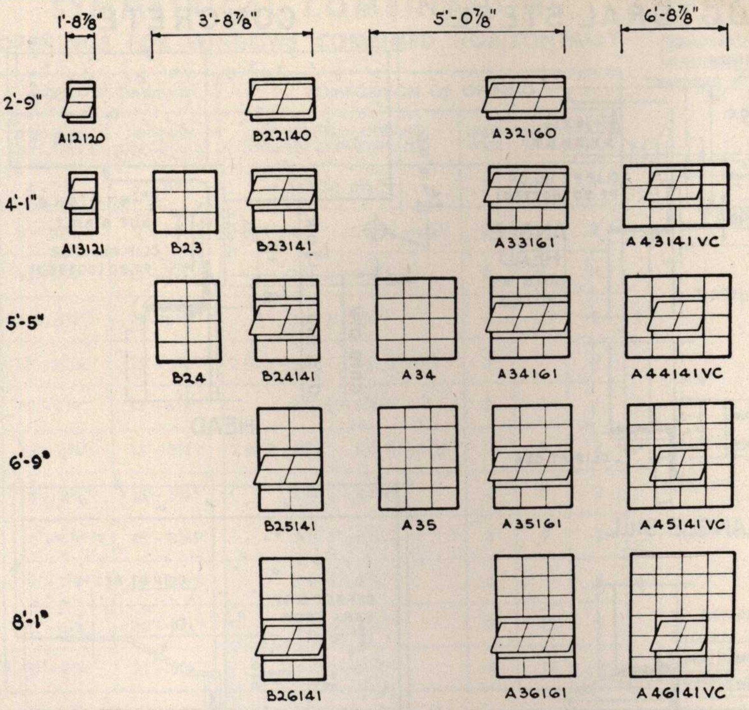
FOR OPEN-IN VENTILATORS



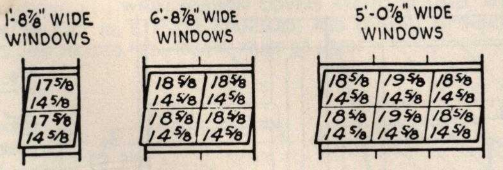
739
Spring Catch



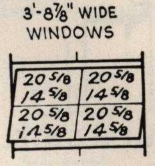
1889
Locking Handle



GLASS SIZES



GLASS IN ALL FIXED LIGHTS (IN BOTH FIXED AND VENTED UNITS) IN THIS GROUP IS 19⅝" × 15⅝"

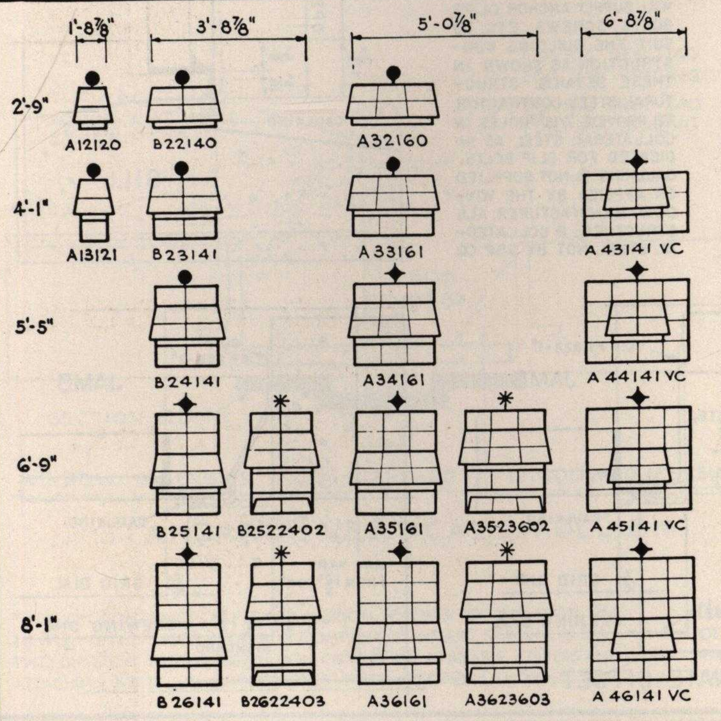


GLASS IN ALL FIXED LIGHTS IS 21⅝" × 15⅝"

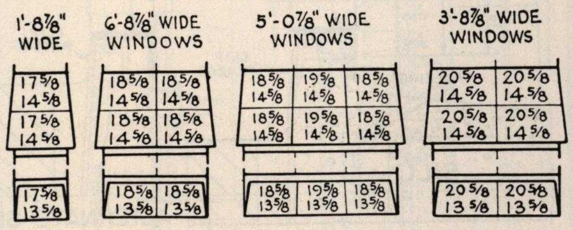
TYPES AT LEFT ARE CARRIED IN STOCK. ALL UNITS HAVE FENESTRA BONDERIZED FINISH. SIZES SHOWN ARE WINDOW AND OPENING DIMENSIONS. . . IN NOMENCLATURES, PREFIX "A" INDICATES TYPES WITH 20" × 16" BAR CENTERS, PREFIX "B" INDICATES 22" × 16" BAR CENTERS.

PIVOTED WINDOWS—STOCK TYPES AND SIZES

IND-123



GLASS SIZES



◀ GLASS IN ALL FIXED LIGHTS IN THIS GROUP IS 19⅝" × 15⅝"

▶ GLASS IN FIXED LIGHTS IS 21⅝" × 15⅝"

✦ INDICATES STOCK TYPES WITH PROJ-OUT ONLY.

● INDICATES STOCK TYPES WITH EITHER PROJ-OUT OR PROJECTED-IN VENTS.

✱ INDICATES STOCK TYPES ONLY AS SHOWN—UPPER VENT PROJECTS OUT, LOWER VENT PROJECTS IN.

SIZES SHOWN ARE WINDOW AND OPENING DIMENSIONS. FRAME MEMBERS PROJECT BEYOND THESE POINTS FOR WALL BEARING.

ALL UNITS HAVE FENESTRA BONDERIZED FINISH.

FIXED (NON-OPENING) TYPES USED WITH COMMERCIAL PROJECTED WINDOWS ARE THE SAME FIXED UNITS AS SHOWN ON PLATE OF PIVOTED WINDOW TYPES & SIZES.

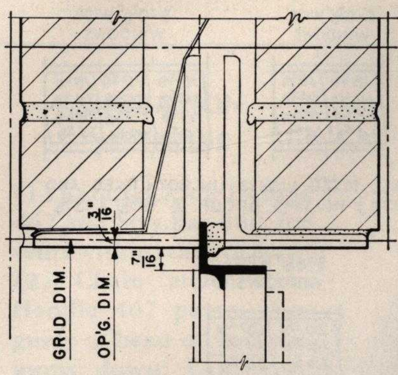
⏢ } INDICATES PROJECTED-OUT VENT ⏥ } INDICATES PROJECTED-IN VENT

IN NOMENCLATURES, PREFIX "A" INDICATES TYPES WITH 20" × 16" BAR CENTERS, PREFIX "B" INDICATES 22" × 16" BAR CENTERS.

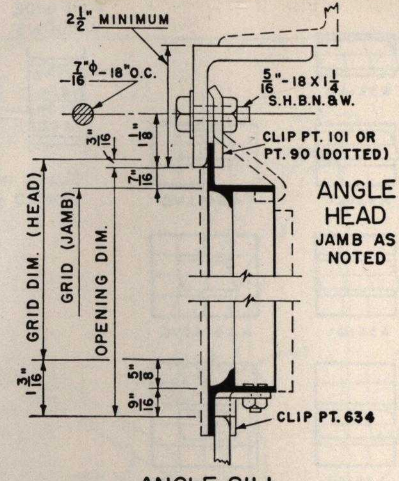
COMMERCIAL PROJECTED WINDOWS—STOCK TYPES AND SIZES

IND-206

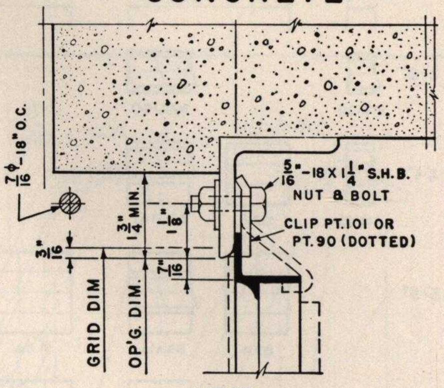
SOLID BRICK STRUCTURAL STEEL CONCRETE



HEAD WITH FLUSH LINTEL

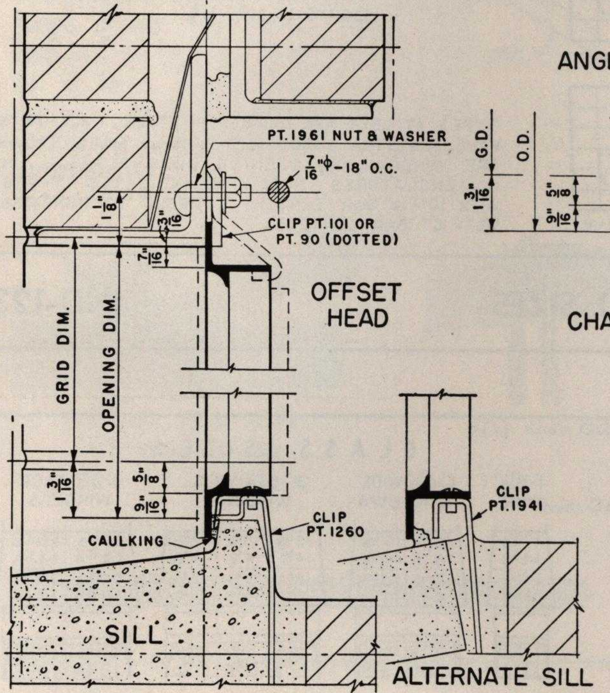


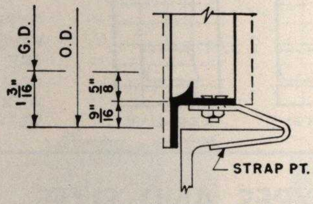
ANGLE SILL



7/16"φ - 18" O.C.
5/16" - 18 X 1 1/4" S.H.B. NUT & BOLT
1 3/4 MIN.
1/8"
CLIP PT. 101 OR PT. 90 (DOTTED)
3/16"
7/16"
GRID DIM
OP'G. DIM.

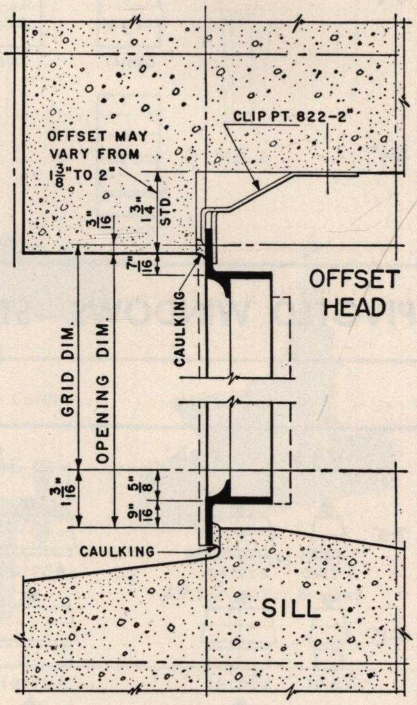
HEAD

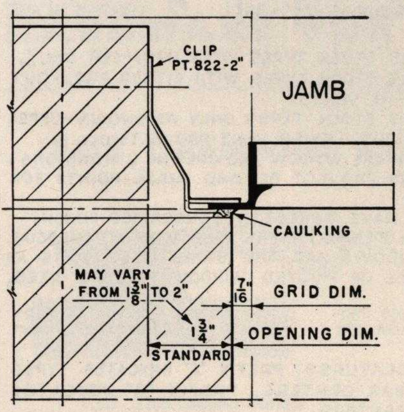


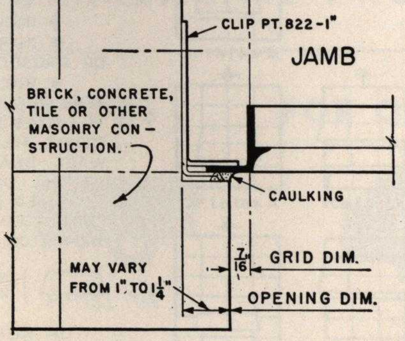


CHANNEL SILL

WINDOW MANUFACTURER WILL SUPPLY ANCHOR CLIPS, BOLTS, SCREWS, ETC. TO SUIT THE BUILDING CONSTRUCTION AS SHOWN IN THESE DETAILS. STRUCTURAL STEEL CONTRACTOR TO PROVIDE 7/16"φ HOLES IN COLLATERAL STEEL AS INDICATED FOR CLIP BOLTS. CAULKING IS NOT SUPPLIED OR APPLIED BY THE WINDOW MANUFACTURER. ALL STRUCTURAL & COLLATERAL STEEL NOT BY D.S.P. CO.

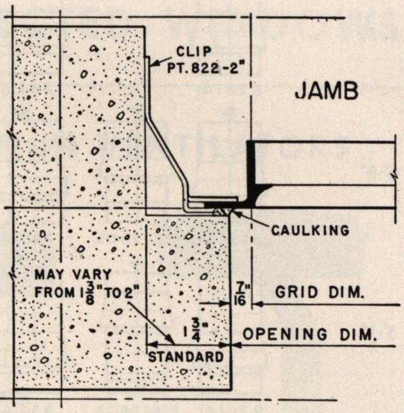






CLIP PT. 822-1"
JAMB
BRICK, CONCRETE, TILE OR OTHER MASONRY CONSTRUCTION.
CAULKING
7/16"
GRID DIM.
MAY VARY FROM 1" TO 1 1/4"
OPENING DIM.

ALTERNATE OFFSET



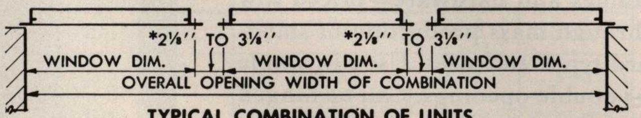
INDUSTRIAL WINDOWS—INSTALLATION IND-122

SYMMETRICAL COMBINATIONS

OPENINGS FOR WINDOWS COMBINED HORIZONTALLY

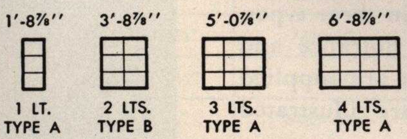
WIDTH OF OPENING		COMPOSITION OF OPENING			
STANDARD (2⅛″ MULL'S)	MAXIMUM (3⅛″ MULL'S)	UNIT WIDTHS IN OPENING (ARRANGE SYMMETRICALLY)	UNITS WIDE	LIGHTS WIDE	NO. OF MULL'S
7′–7⅞″	7′–8⅞″	2 @ 3′–8⅞″	2	4	1
8′–10⅞″	9′–0⅞″	2 @ 1′–8⅞″ 1 @ 5′–0⅞″	3	5	2
10′–3⅞″	10′–4⅞″	2 @ 5′–0⅞″	2	6	1
11′–6⅞″	11′–8⅞″	3 @ 3′–8⅞″	3	6	2
12′–10⅞″	13′–0⅞″	2 @ 3′–8⅞″ 1 @ 5′–0⅞″	3	7	2
13′–7⅞″	13′–8⅞″	2 @ 6′–8⅞″	2	8	1
14′–6⅞″	14′–8⅞″	2 @ 3′–8⅞″ 1 @ 6′–8⅞″	3	8	2
15′–5⅞″	15′–8⅞″	4 @ 3′–8⅞″	4	8	3
15′–6⅞″	15′–8⅞″	3 @ 5′–0⅞″	3	9	2
19′–4⅞″	19′–8⅞″	5 @ 3′–8⅞″	5	10	4
20′–6⅞″	20′–8⅞″	3 @ 6′–8⅞″	3	12	2
20′–9⅞″	21′–0⅞″	4 @ 5′–0⅞″	4	12	3

OVERALL WIDTHS OF OPENINGS MAY VARY AS DESIRED BETWEEN DIMENSIONS SHOWN IN TABLE (LEFT) BY VARYING MULLION SPACINGS. SEE TYPICAL COMBINATION BELOW. . . . WHEN MULLION COVERS ARE TO BE USED, ALL MULLIONS MUST BE 2⅛″ (D. S. P. CO. STANDARD) AND OVERALL OPENING WIDTHS IN COLUMN HEADED "STANDARD" MUST BE USED.



TYPICAL COMBINATION OF UNITS

*NOTE: FOR MULLION DETAILS AND VARIATIONS SEE PLATE IND-117



WIDTHS OF SINGLE UNITS

LTS.	DIM.	LTS.	DIM.
2	2′-9″	6	8′-1″
3	4′-1″	7	9′-5″
4	5′-5″	8	10′-9″
5	6′-9″	9	12′-1″

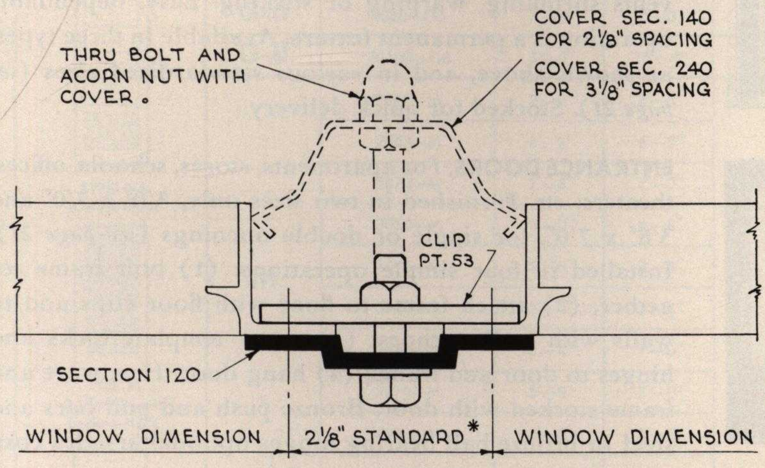
UNIT HEIGHTS

UNIT WIDTHS AND HEIGHTS SHOWN ARE WINDOW AND OPENING DIMS.

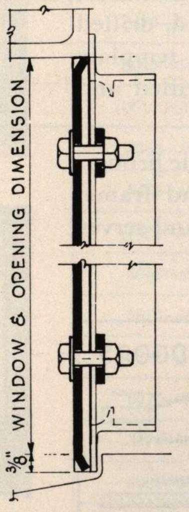
TO DETERMINE THE OVERALL OPENING DIMENSION OF COMBINATIONS NOT SHOWN, ADD TOTAL OF WINDOW DIMENSIONS AND MULLION DIMENSIONS TOGETHER. THE NUMBER OF MULLIONS IN ANY COMBINATION EQUALS NUMBER OF WINDOW UNITS MINUS ONE.

INDUSTRIAL WINDOWS—COMBINATIONS

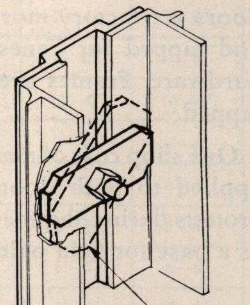
IND-124



STANDARD VERTICAL MULLION



VERT. SECTION



MULLION CLIP MAY BE TURNED TO ANY ANGLE FOR NARROW MULLION SPACING

NUMBER OF MULLION CLIPS AND OF COVER BOLTS VARY WITH MULLION HEIGHT. CONSULT REPRESENTATIVE

MULLION CLIP

*MULLION CONSTRUCTION PERMITS MULLION SPACING TO VARY FROM 1⅝″ TO 3⅛.″ DETROIT STEEL PRODUCTS COMPANY STANDARD SPACING IS 2⅛.″ TWO DIFFERENT WIDTHS OF MULLION COVERS ARE AVAILABLE. COVERS AND ATTACHING BOLTS ARE SUPPLIED ONLY WHEN SPECIFIED ON ORDER. MULLIONS AND COVERS ARE CARRIED IN WAREHOUSE FOR ALL STOCK HEIGHTS OF PIVOTED, COMMERCIAL PROJECTED AND SECURITY WINDOWS. IF LONG RUNS OF SASH ARE TO BE USED, CONSULT DETROIT STEEL PRODUCTS COMPANY REPRESENTATIVE.

INDUSTRIAL WINDOWS—VERTICAL MULLIONS

IND-117

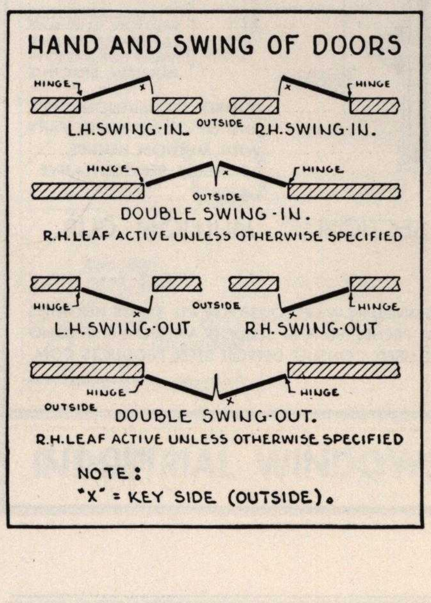
HOLLOW METAL SWING DOORS AND FRAMES

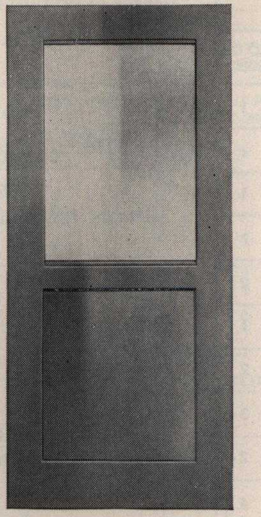
STURDY, attractive Fenestra metal doors, complete with frames and hardware—priced low through mass production of standard types and sizes. Used in single or double openings. Can be hinged right or left, to swing in or out. Three designs available—Swing, Entrance and Underwriters'. Swing Doors are supplied in three types, as shown at right. Entrance and Underwriters' Doors are supplied in the types that are illustrated below, at right.

Fenestra Doors are designed for long-lasting, trouble-free operation. Hollow metal stiles and rails are 16-gauge steel. Bottom rail is 1¾" x 8"; stiles and head rail 1¾" x 5½". Corners are mitered, welded and ground smooth. A noiseless bottom panel is composed of two steel sheets separated by a layer of insulation.

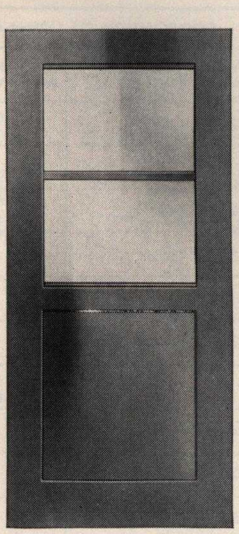
To save time and cost in the field, doors are factory mortised, drilled and tapped for Fenestra template hardware. Frames are drilled and tapped.

One shop coat of metallic primer, applied to both door and frame, protects during shipment and serves as a base for field paint.

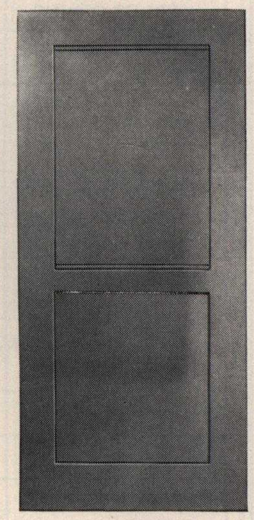




TYPE G
Single glass light and steel panel.

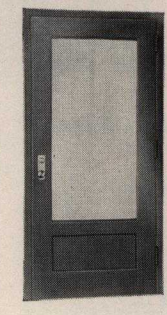


TYPE G2-4-6 or 8
Two, four, six or eight glass lights and steel panel.

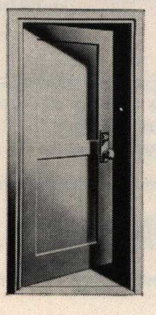


TYPE M
Two steel panels.

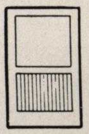
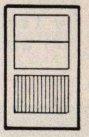
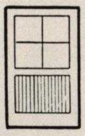
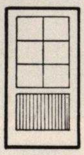
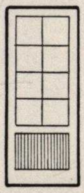
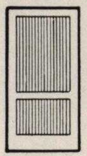
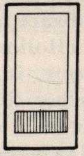
SWING DOORS. Used where fine appearance is to be combined with economy and lasting service. Ideal for various locations in office buildings, hotels, apartments, schools, stores, factories, garages, filling stations, bakeries, dairies, etc. Their metal construction protects from fire and prevents shrinking, warping or sticking. Easy, dependable operation is a permanent feature. Available in three types, as shown above, and in various standardized sizes (*see page 21*). Stocked for quick delivery.



ENTRANCE DOORS. For apartments, stores, schools, offices, theaters, etc. Furnished in two sizes only, 3'0" x 7'0" and 3'8" x 7'0", for single or double openings (*see page 21*). Installed in four simple operations: (1) bolt frame together; (2) attach frame to floor with floor clips and to walls with wall anchors; (3) screw template locks and hinges to door and frame; (4) hang door. Hardware and frame stocked with door. Bronze push and pull bars and steel or bronze ball bearing hinges optional at extra cost.



UNDERWRITERS' DOORS. For use where building codes or insurance regulations require use of Labeled doors. Pass both 1-hour and 1½-hour tests. Meet requirements for Underwriters' B, C, D and E Labels. Available in three single-door sizes and two double (*see page 21*). All sizes, complete with Labeled frames and Underwriters' approved hardware, are carried in stock for immediate delivery. Upper and lower panels are 18-gauge metal sheets separated by ¼" asbestos millboard insulation.

LEAF DESIGN	LEAF TYPE	SINGLE DOORS			GLASS SIZES	DOUBLE DOORS		
		DOOR TYPE	DOOR OP'NG DIM.			DOOR TYPE	DOOR OP'NG DIM.	
			WIDTH	HEIGHT			WIDTH	HEIGHT
 **TYPE G** one glass light	**G**	2868—G	2′—8″	6′—8″	21½″ x 32¾″	5468—G	5′—4″	6′—8″
		2870—G	2′—8″	7′—0″	21½″ x 36¾″	5470—G	5′—4″	7′—0″
		3068—G	3′—0″	6′—8″	25½″ x 32¾″	6068—G	6′—0″	6′—8″
		3070—G	3′—0″	7′—0″	25½″ x 36¾″	6070—G	6′—0″	7′—0″
		3468—G	3′—4″	6′—8″	29½″ x 32¾″	6868—G	6′—8″	6′—8″
		3470—G	3′—4″	7′—0″	29½″ x 36¾″	6870—G	6′—8″	7′—0″
		3870—G	3′—8″	7′—0″	33½″ x 36¾″	7470—G	7′—4″	7′—0″
		4080—G	4′—0″	8′—0″	37½″ x 48¾″	8080—G	8′—0″	8′—0″
 **TYPE G-2** 2 glass lights	**G-2**	2868—G2	2′—8″	6′—8″	21½″ x 16″	5468—G2	5′—4″	6′—8″
		2870—G2	2′—8″	7′—0″	21½″ x 18″	5470—G2	5′—4″	7′—0″
		3068—G2	3′—0″	6′—8″	25½″ x 16″	6068—G2	6′—0″	6′—8″
		3070—G2	3′—0″	7′—0″	25½″ x 18″	6070—G2	6′—0″	7′—0″
 **TYPE G-4** 4 glass lights	**G-4**	3468—G4	3′—4″	6′—8″	14⅜″ x 16″	6868—G4	6′—8″	6′—8″
		3470—G4	3′—4″	7′—0″	14⅜″ x 18″	6870—G4	6′—8″	7′—0″
		3870—G4	3′—8″	7′—0″	16⅜″ x 18″	7470—G4	7′—4″	7′—0″
 **TYPE G-6** 6 glass lights	**G-6**	4080—G6	4′—0″	8′—0″	18⅜″ x 15¾″	8080—G6	8′—0″	8′—0″
 **TYPE G-8** 8 glass lights	**G-8**	50100—G8	5′—0″	10′—0″	24⅜″ x 15¾″	100100—G8	10′—0″	10′—0″
 **TYPE M** 2 Metal Panels Underwriter's door similar	**M**	2068—M	2′—0″	6′—8″	TWO METAL PANELS	4068—M	4′—0″	6′—8″
		2868—M	2′—8″	6′—8″		5468—M	5′—4″	6′—8″
		2870—M	2′—8″	7′—0″		5470—M	5′—4″	7′—0″
		3068—M	3′—0″	6′—8″		6068—M	6′—0″	6′—8″
		3070—M	3′—0″	7′—0″		6070—M	6′—0″	7′—0″
		3468—M	3′—4″	6′—8″		6868—M	6′—8″	6′—8″
		3470—M	3′—4″	7′—0″		6870—M	6′—8″	7′—0″
		3870—M	3′—8″	7′—0″		7470—M	7′—4″	7′—0″
		4080—M	4′—0″	8′—0″		8080—M	8′—0″	8′—0″
	UNDERWRITER'S	UW—3070—M	3′—0″	7′—0″		UW—6070—M	6′—0″	7′—0″
		UW—3470—M	3′—4″	7′—0″		UW—6870—M	6′—8″	7′—0″
		UW—3970—M	3′—9″	7′—0″		NOT MADE	—	—
 **TYPE LG** Entrance Door	**LG**	3070—LG	3′—0″	7′—0″	25½″ x 54¾″	6070—LG	6′—0″	7′—0″
		3870—LG	3′—8″	7′—0″	33½″ x 54¾″	7470—LG	7′—4″	7′—0″

SWING DOOR—TYPES AND SIZES

DO-106

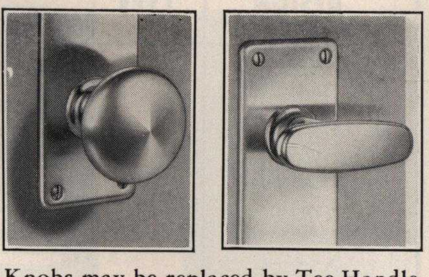
SWING DOOR LOCKS

TO ASSURE maximum ease of operation, with economy of first cost and maintenance, a complete line of door hardware, made to Fenestra specifications, has been developed by leading hardware manufacturers. All hardware is designed for the requirements of standard hollow metal doors.

Template locks are constructed with heavy, bronze U. S. Government fronts and strikes, wrought bronze knobs and escutcheons, and cast iron cases. All finishes are U.S. No. 10.

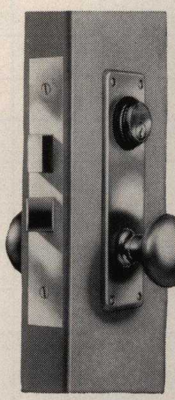
Fenestra Swing Doors are factory mortised and machined, and frames are factory machined, for Fenestra template locks and hinges.

Cylinder locks are not available for doors over 8′ 0″ high (use tee latch 1648).

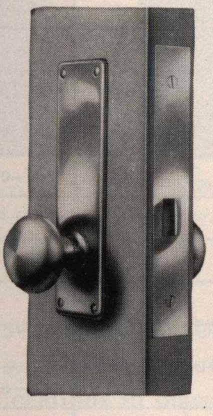


Knobs may be replaced by Tee Handle on locks 1979, 1980, 1983 and 1984.

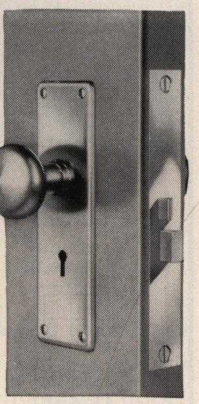
CYLINDER LOCK 1979—Latch bolt operated from inside and outside by knobs. Dead bolt operated by key outside and by thumb turn inside. For use in offices, etc., where a simple lock with the security of a dead bolt is required. U. S. Gov't No. 93.



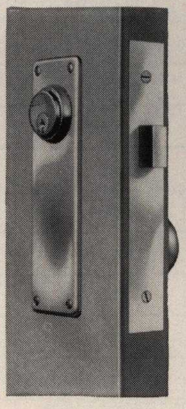
SIMPLE LATCH LOCK 1980—Operated from inside and outside by knobs. Acts only to hold door closed. Not equipped with dead bolt, stops, night works, keys or other devices for locking. For passage doors, closet doors, etc. U. S. Gov't No. 28.



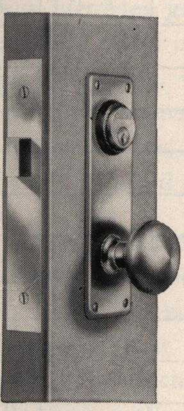
BIT KEY LOCK 1981—Latch bolt operated from inside and outside by knobs (no cylinders or other night works). Dead bolt locked or unlocked from inside or outside by 3-tumbler bit key. For locations requiring reasonable security. U. S. Gov't No. 4A.



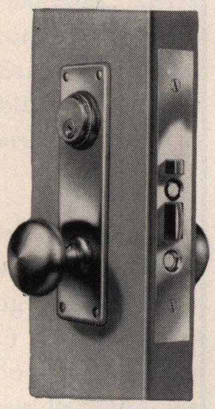
CYLINDER LOCK 1982—Dead bolt operated from outside by key, inside by thumb turn. Fixed knob on hinge side only. Recommended for use with door closer. Provides push and pull operation. Key operated dead bolt offers security. U. S. Gov't No. 114.



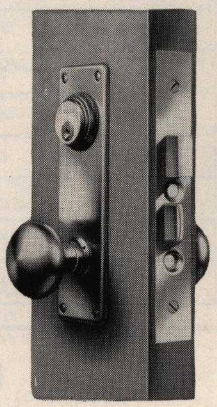
CYLINDER LOCK 1982-A — Dead bolt operated from both inside and outside by key. Fixed knob on hinge side only. Recommended for use with door closer. Provides push and pull operation. Key operated dead bolt offers security. U.S. Gov't No. 115.



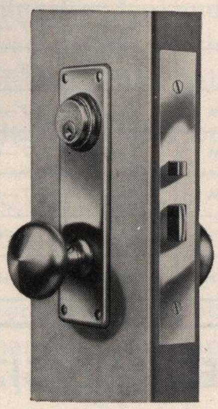
CYLINDER LOCK 1983—Latch bolt operated from inside and outside by knobs. Outside knob locked by stops, unlocked by key. Guard bolt, retracted when door is closed, locks latch bolt and prevents picking. No dead bolt. U. S. Gov't No. 97.

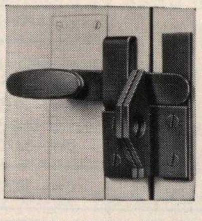


CYLINDER LOCK 1984—Latch bolt operated from inside and outside by knobs. Outside knob locked by stops, unlocked by outside key. Dead bolt operated from inside by thumb turn. Both bolts operated from outside by key. U. S. Gov't No. 88.



CYLINDER LOCK 1993—Inside operation at all times by knob. Cylinder outside only. Outside knob locked by key. Guard bolt, retracted when door is closed, locks latch bolt and prevents picking. No dead bolt. U. S. Gov't No. 105 Mod.



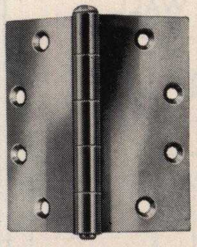


TEE LATCH 1648 — For attachment. inside or outside. Latch operated from both sides by handles. Locked by padlock.

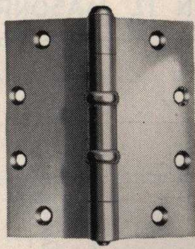
ORDERING INFORMATION

When ordering hardware for Fenestra Hollow Metal Doors, indicate whether the door swings in or out, and whether it is hinged right or left. Face door from outside to determine hand and swing.

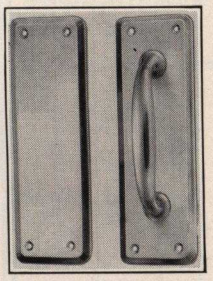
HARDWARE FOR SWING DOORS



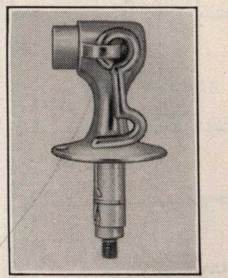
HINGE 1643 — 5″ full-mortise, template-type, loose-pin hinge. Solid steel. Primed for finish painting.



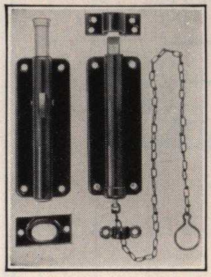
1643-A (steel) or 1643-B (bronze) 5″ full-mortise, template-type, loose-pin hinge with ball bearings.



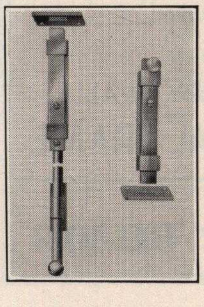
PUSH PLATE 1985 and PULL PLATE 1986 — 2¼″ x 7⅜″. For doors up to and including 8′ high. Pts. 1491 and 1490, 3½″ x 15″, also available. Bronze with U. S. No. 10 finish.



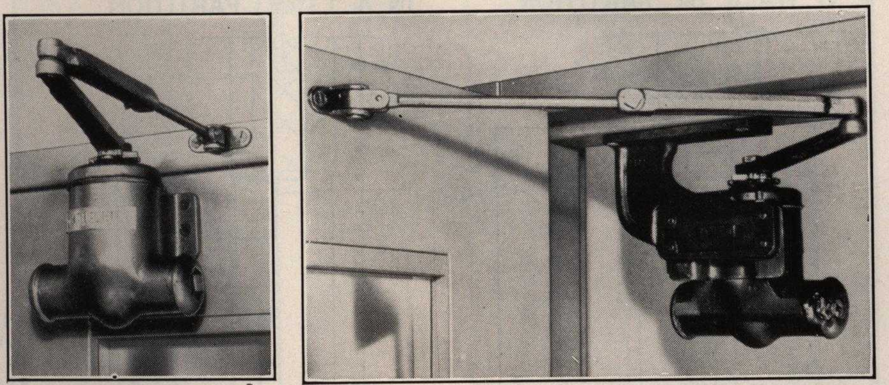
DOOR STOP 1493 — Constructed of cast bronze; U. S. No. 10 finish. Attached to floor. Supplied with eye for door. Door Stops furnished only when specified.



CHAIN BOLT 1987 and FOOT BOLT 1988 — For inactive leaf of double doors. Black finish steel bolts, housing and guides. Steel friction springs. 24″ steel chain.



HEAD BOLT 2110 and FOOT BOLT 2111 — For inactive leaf of double doors. Holds door leaf in open or closed position. Bronze with U. S. No. 10 finish.



DOOR CHECK—Rack and pinion type liquid door check. Part 1462 (U.S. Gov't No. 3003, size III) for 2868, 2870 and 3070 doors. Part 1463 (Gov't No. 3004, size IV) for 3468, 3470 and 3870 doors and all Underwriters' Labeled doors. Part 1464 (Gov't No. 3005, size V) for 4080 doors. Where soffit brackets are required, door checks 1462, 1463 and 1464 use soffit brackets 1466, 1467 and 1468 respectively.

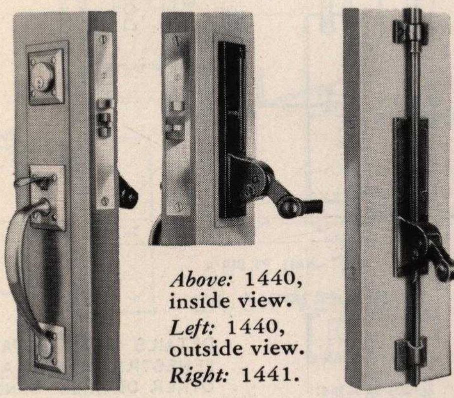
ANTI-PANIC HARDWARE SETS

Part 1440 (*right*), with inside and outside control, is used on open-out doors. It is equipped with a cylinder outside and a guarded latch bolt that is pick-proof. Inside operation: horizontal push bar retracts latch bolt; door opens from inside at all times. Outside operation: latch bolt is released by key and retracted by thumb-latch.

Part 1441 (*far right*) has inside control only. Operation is by horizontal push bar that retracts vertical locking bolt at top and bottom of door, allowing quick exit. Door cannot be opened from outside.

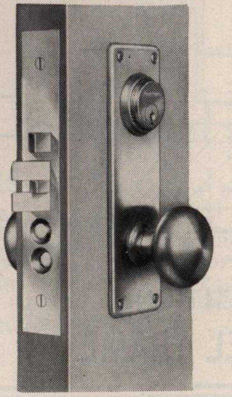
Parts 1440 and 1441 are stand-by hardware for casual use only.

For heavy duty, substitute parts 1990 and 1991 respectively.



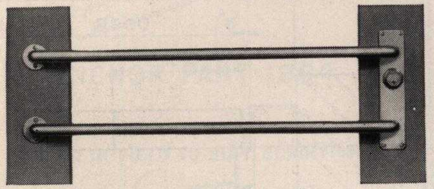
Above: 1440, inside view.
Left: 1440, outside view.
Right: 1441.

HARDWARE FOR UNDERWRITERS' LABELED DOOR

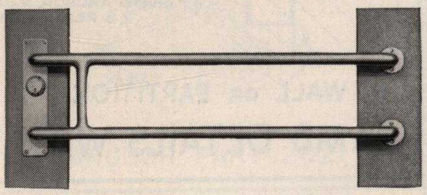


Cylinder lock 1660 (*left*) has night works and guarded latch bolt. A ¾″ anti-friction pick-proof latch bolt is operated from both sides by knobs. Outside knob is locked by stops, unlocked by key. No dead bolt. Simple latch 1660-C (*not shown*) has ¾″ anti-friction latch bolt operated from both sides by knobs. It is not equipped with locking devices. Both locks, 1660 and 1660-C, have been approved by Underwriters' Laboratories.

FOR ENTRANCE DOORS 3070, 3870, 6070 AND 7470



Inside view—open-out door.



Outside view—open-out door.

Entrance doors use any Swing door lock or, at extra cost, bronze Push and Pull Bars 1999 with lock 1982-C (not shown).

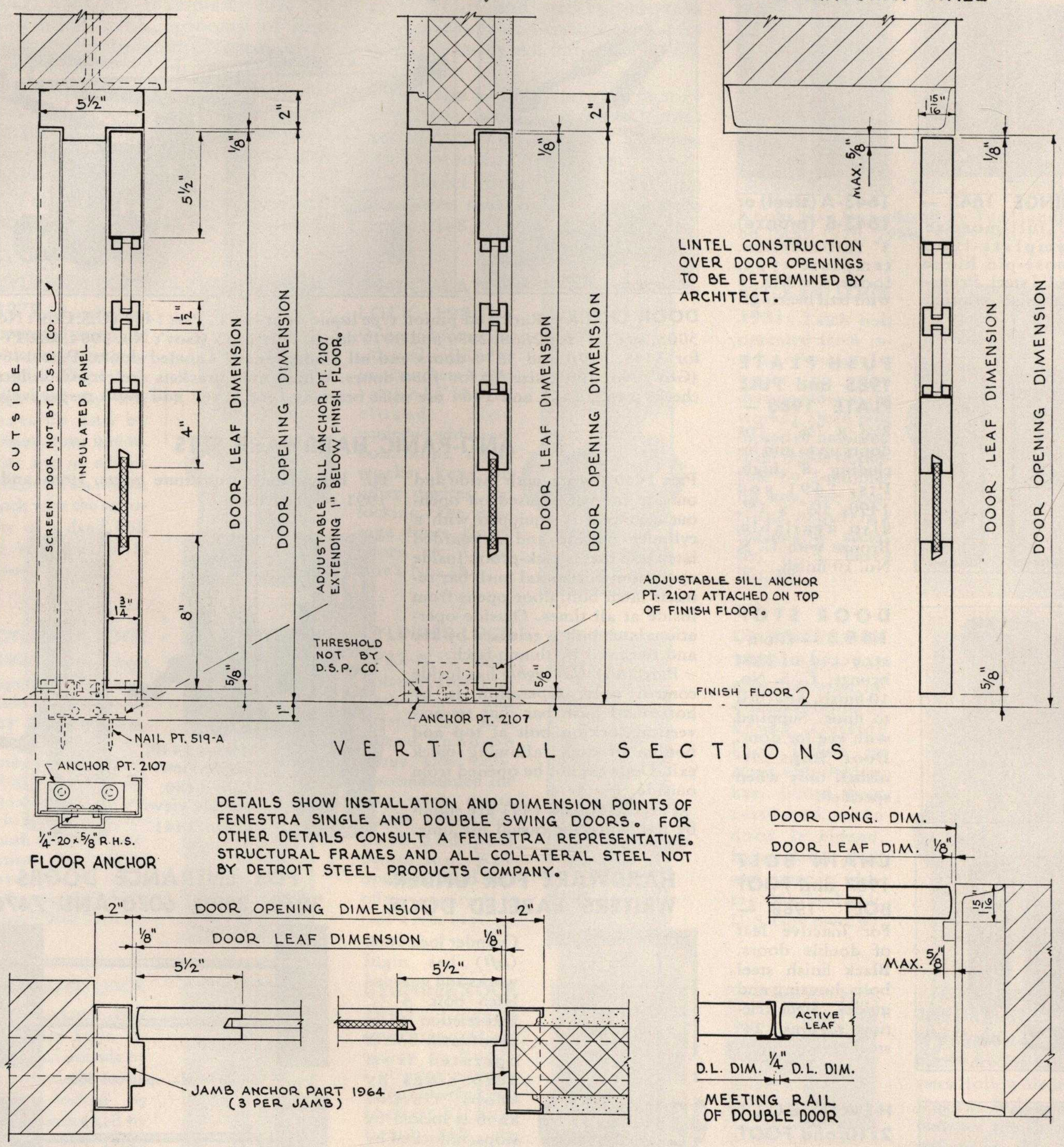
WITH FENESTRA PRESSED STEEL FRAME

WITH STRUCTURAL FRAME

8" WALL or PARTITION

IN 4" (TILE) PARTITION

IN 12" MASONRY WALL



DETAILS SHOW INSTALLATION AND DIMENSION POINTS OF FENESTRA SINGLE AND DOUBLE SWING DOORS. FOR OTHER DETAILS CONSULT A FENESTRA REPRESENTATIVE. STRUCTURAL FRAMES AND ALL COLLATERAL STEEL NOT BY DETROIT STEEL PRODUCTS COMPANY.

8" WALL or PARTITION

4" (TILE) PARTITION

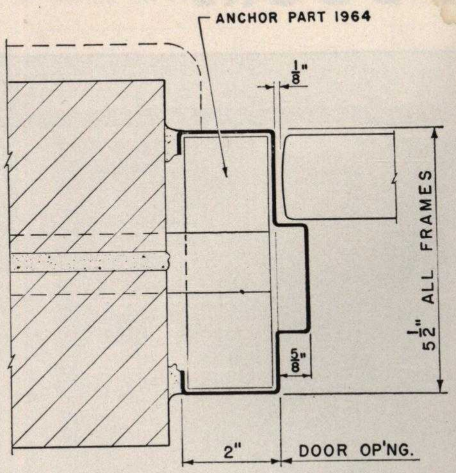
12" MASONRY WALL

JAMB DETAILS WITH PRESSED STEEL FRAME

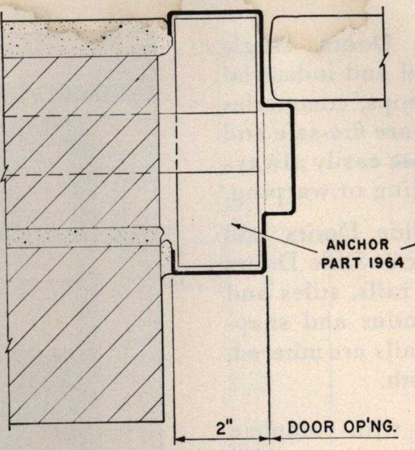
STRUCTURAL FRAME

SWING DOORS—SECTIONS, INSTALLATION

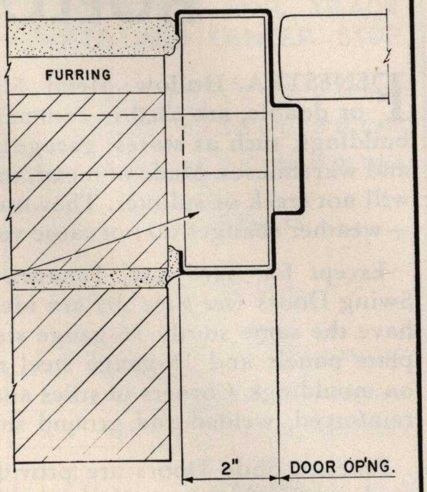
DO-103



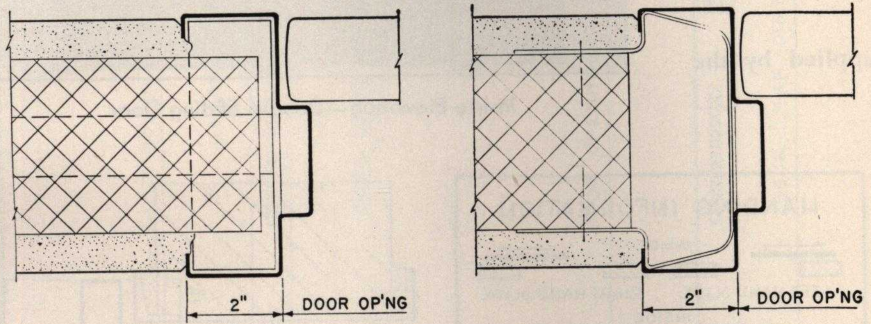
SOLID BRICK OR CONCRETE BLOCK



SOLID MASONRY WITH PLASTER



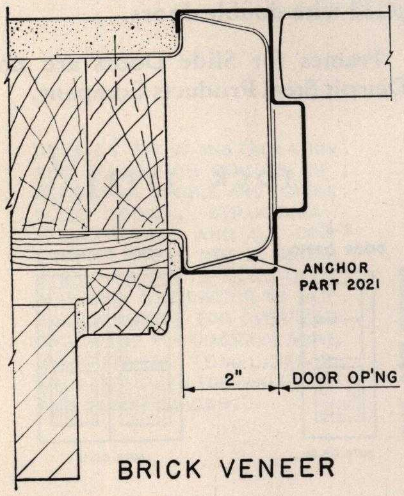
SOLID MASONRY WITH FURRING



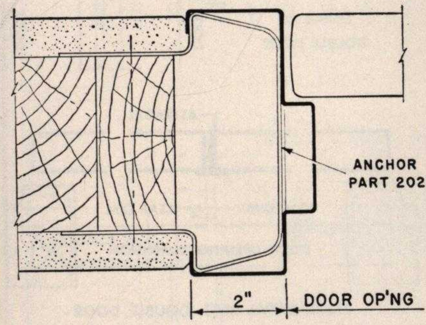
WITH ANCHOR PART 1964

WITH ANCHOR PART 2021

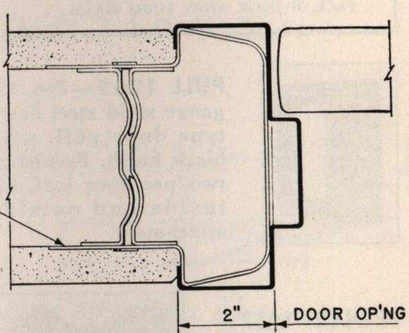
4" GYPSUM OR HOLLOW TILE PARTITION



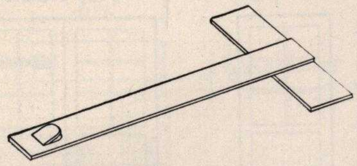
BRICK VENEER



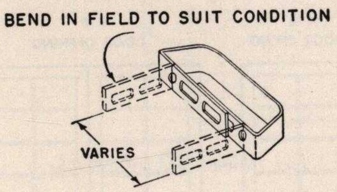
WOOD STUD PARTITION



STRAN STEEL STUD PARTITION



ANCHOR PART 1964



ANCHOR PART 2021

DETAILS SHOW JAMB DETAILS FOR PRESSED STEEL FRAMES INSTALLED IN VARIOUS WALL OR PARTITION CONSTRUCTIONS. ANCHORS PART 1964 ARE SUPPLIED UNLESS ANCHORS PART 2021 ARE SPECIFIED (3 ANCHORS SUPPLIED FOR EACH JAMB). ANCHORS PART 2021 MUST BE USED WITH BRICK VENEER WALL OR WOOD OR STRAN-STEEL STUD PARTITIONS.

PRESSED STEEL FRAMES—INSTALLATION

DO-105

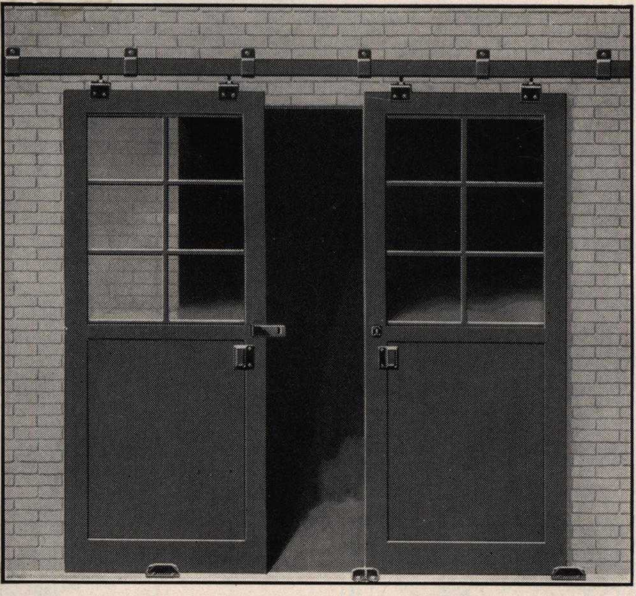
HOLLOW METAL SLIDE DOORS

FENESTRA Hollow Metal Slide Doors, single or double, are used in commercial and industrial buildings, such as stores, garages, shops, creameries and warehouses. Made of metal, they are fire-safe and will not crack or splinter. They operate easily always—weather changes do not cause swelling or warping.

Except for hardware, Fenestra Slide Doors and Swing Doors (*see page 20*) are identical. Slide Doors have the same sturdy 16-gauge steel rails, stiles and plate panels and 18-gauge steel muntins and snap-on mouldings. Corners of stiles and rails are mitered, reinforced, welded and ground smooth.

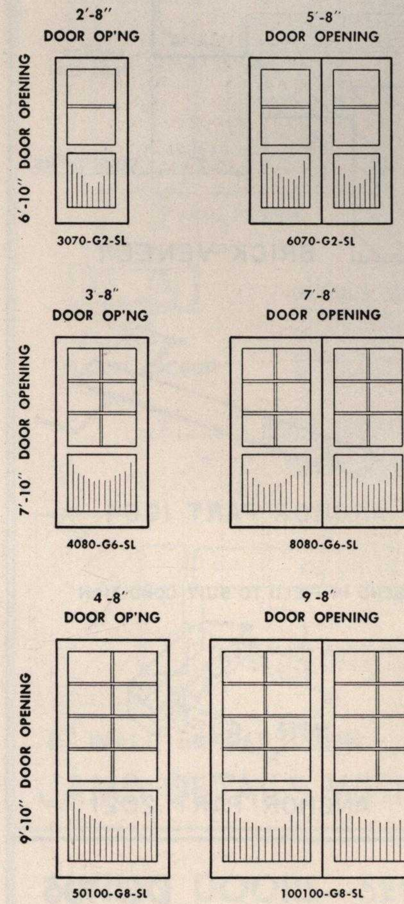
Fenestra Slide Doors are provided with complete track equipment, including brackets, track, trolleys and clevises. Hand pulls, floor guides, stops, binders, hasp and staple are also furnished. An astragal is supplied with double doors.

Frames for Slide Doors are not supplied by the Detroit Steel Products Company.

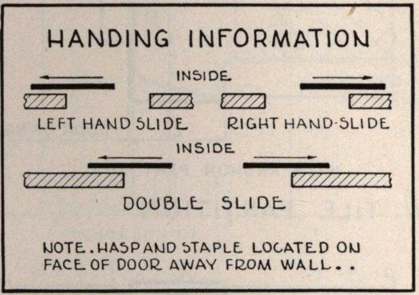


Inside Elevation—Double Sliding Door

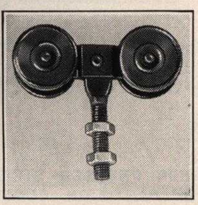
STOCK TYPES



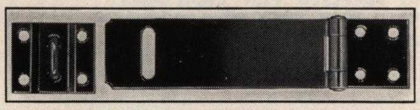
SINGLE DOORS **DOUBLE DOORS**



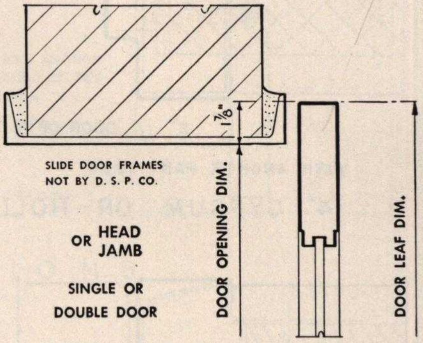
PULL 1265—No. 12-gauge solid steel flush-type door pull, with black finish. Furnished two per door leaf, for inside and outside attachment.



TROLLEY 1617—Roller bearing construction. Steel with black finish. Designed for long-lasting service.

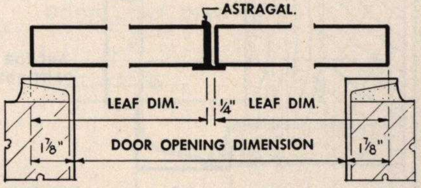


HASP AND STAPLE 1639—For single and double doors. Black finish on solid steel. (Padlock not supplied.)

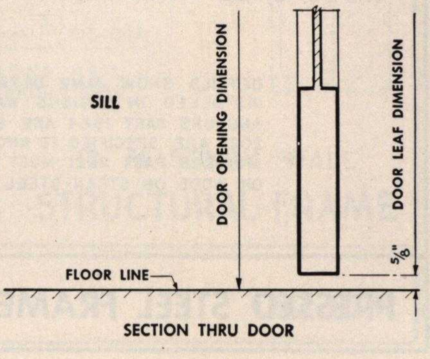


OR HEAD JAMB

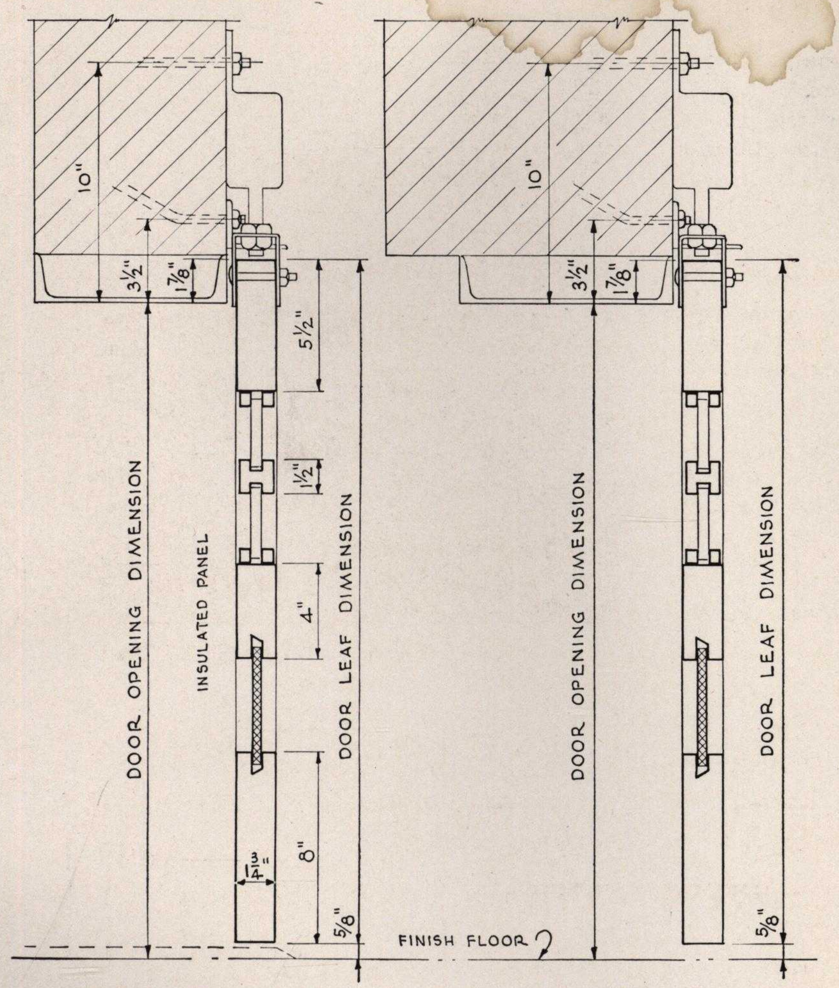
SINGLE OR DOUBLE DOOR



HORIZONTAL SECT DOUBLE DOOR



SECTION THRU DOOR

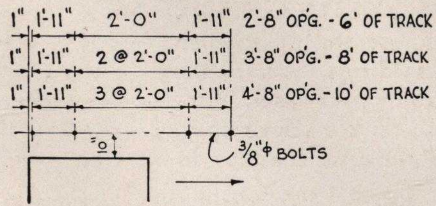


8" WALL or PARTITION

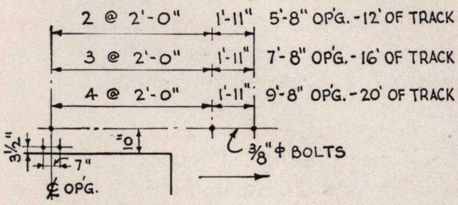
12" MASONRY WALL

VERTICAL SECTIONS

BOLT LOCATION FOR TRACK BRACKETS AND CENTER STOP

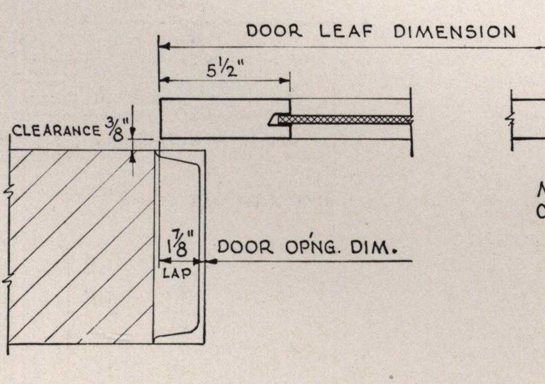

1" 1'-11" 2'-0" 1'-11" 2'-8" OP'G. - 6' OF TRACK
1" 1'-11" 2 @ 2'-0" 1'-11" 3'-8" OP'G. - 8' OF TRACK
1" 1'-11" 3 @ 2'-0" 1'-11" 4'-8" OP'G. - 10' OF TRACK
0"
3/8"φ BOLTS

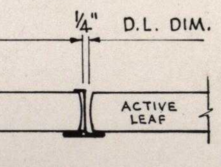
SINGLE SLIDE


2 @ 2'-0" 1'-11" 5'-8" OP'G. - 12' OF TRACK
3 @ 2'-0" 1'-11" 7'-8" OP'G. - 16' OF TRACK
4 @ 2'-0" 1'-11" 9'-8" OP'G. - 20' OF TRACK
3½"
7"
0"
℄ OP'G.
3/8"φ BOLTS

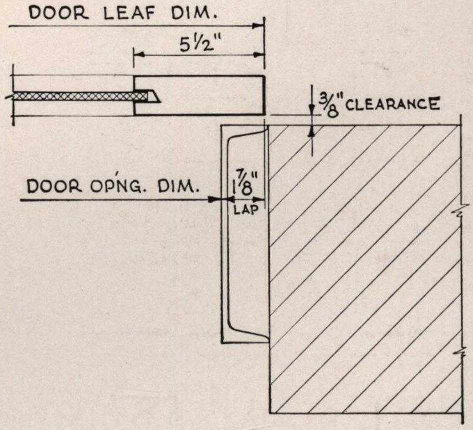
DOUBLE SLIDE

DETAILS SHOW INSTALLATION AND DIMENSION POINTS OF FENESTRA SINGLE AND DOUBLE SLIDE DOORS. STRUCTURAL STEEL FRAMES AND ALL COLLATERAL STEEL NOT BY DETROIT STEEL PRODUCTS COMPANY. MASONRY CONTRACTOR TO SET ANCHOR BOLTS FOR OVERHEAD HARDWARE PER DIAGRAMS ABOVE. USE PHYSICAL TEMPLATES TO LOCATE HOLES FOR WALL STOPS AND FLOOR GUIDES.





MEETING RAIL OF DOUBLE DOOR



JAMB DETAIL
8" WALL or PARTITION

JAMB DETAIL
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